Appendix C

Biological Resources Technical Report

Biological Resources Technical Report

Mesa Verde Specific Plan Area 2 Amendment 2

JULY 2025

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Printed on 30% post-consumer recycled material.

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Acronyms and Abbreviations

Acronym	Definition
amsl	above mean sea level
Cal-IPC	California Invasive Plant Council
CASSA	Criteria Area Species Survey Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulation
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
DSH	diameter at standard height
EPA	U.S. Environmental Protection Agency
FESA	federal Endangered Species Act
GIS	geographic information system
HCP	habitat conservation plan
HUC	Hydrologic Unit Code
I-10	Interstate 10
JPR	Joint Project Review
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
OHWM	ordinary high water mark
RCA	Regional Conservation Authority
RWQCB	regional water quality control board
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

This report documents the results of surveys conducted to identify potential biological resource existing conditions and proposed impacts for the Mesa Verde Specific Plan Area 2 Amendment 2 Project (Project) located in the City of Calimesa, Riverside County, California (City). Figure 1, Project Location, shows the regional location of the Project and the site vicinity. All figures are provided in Appendix A, Figures.

The purpose of this report is to (1) describe the conditions of biological resources within the study area in terms of vegetation communities, plants, wildlife, wildlife habitats, and wetlands; (2) quantify potential direct and indirect impacts to special-status biological resources that would result from the Project; (3) discuss those impacts in terms of biological significance in view of federal, state, and local laws; the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP); the City of Yucaipa Municipal Code; and the City of Calimesa General Plan and Municipal Code (policies); and (4) specify measures to avoid, minimize, and/or mitigate any significant impacts that would occur to special-status biological resources as a result of Project implementation.

1.1 Project Description

1.1.1 Project Location

The approximately 1,475.8-acre Project study area (i.e., study area) includes the 1,463.1-acre Project site and 12.7 acres of off-site improvements. The Project site includes 239.6 acres of avoidance and 64.2 acres of MSHCP Conservation that together form the 303.8 acres of Project open space. The Project site also includes 5.0 acres of road easement.[1]

The Project is located in the western portion of the City, which is located in western Riverside County (Figure 1, Project Location). The study area is located immediately west of Interstate 10 (I-10) and south of the Riverside and San Bernardino County line; however, some of the off-site improvement areas occur within the City of Yucaipa, which is located within San Bernardino County. The Project is intersected by Sandalwood Drive to the east and County Line Lane to the north. Specifically, the study area is located in Sections 8, 14, 22 and 23, Township 2 South, Range 2 West, as depicted on the U.S. Geological Survey (USGS) El Casco and Yucaipa, California 7.5-minute topographic quadrangle maps. Regional access to the Project is provided via Sandalwood Drive and County Line Lane. The Project consists of 20 Assessor's Parcel Numbers listed in Table 1.

Table 1. List of Assessor's Parcel Numbers within the Study Area

Riverside County							
411210010	411210028	413030025	413040013	413040014	413040017	413040018	413040020
413040023	413050009	413050010	413050012	413160011	413200003	413200040	413200042
413200044	413200048	—	—	—	—	—	—
San Bernardino County							
30121108	30121102	—	—	—	—	—	—

[1] There are three road easements occurring along the northern boundary of the Project site. Two road easements are designated for future access roads associated with the Yucaipa Valley Water District solar array project, and one road easement represents an existing paved road (i.e., W County Line Lane). No impacts will occur within these easements as a part of the proposed Project, and the easements have not been included in the quantification of Project avoidance or conservation.

1.1.2 Project Description

The Mesa Verde Specific Plan Area 2 Amendment 2 Project (i.e., Project), which is an Amendment to the Mesa Verde Estates Specific Plan (SPA 13-01) that was previously adopted in 2007 and subsequently amended in 2017, would serve as the policy and regulatory document, functioning as the zoning code, for the development of the Mesa Verde Specific Plan Area 2 Amendment 2 Area. All future development plans and entitlements must be consistent with regulations set forth in the Mesa Verde Specific Plan Area 2 Amendment 2 and, for issues not covered, must be consistent with all applicable City regulations and/or an approved Development Agreement.

Project Site

The Mesa Verde Specific Plan Area 2 Amendment 2 Project (i.e., Project) would be implemented in phases over time, and would permit a maximum of 3,650 residential units, including a mix of single-family detached, single-family attached, and multi-family units. The projected number of units within each of the residential zones include: 790 units of High Residential; 594 units of Medium High; 1,450 units of Medium; 677 units of Low Medium; and 139 units of Low. The Project includes up to 4.9 million square feet of Business Park (industrial/logistics use, up to 250,000 square feet of Commercial, 2 elementary school sites, open space and public/private parks, utility infrastructure, and roadways. An internal network of trails would connect the Project's land uses and parks. These trails would be within the development footprint only, and no new trails would be created outside of the development area. There would be no designated access points to any existing trails in the open space areas overlapping the MSHCP Criteria Area. Refer to Section 2.3.1 for details on the MSHCP Criteria Area.

Open Space

The Project includes 303.8 acres of on-site open space that will be fully avoided and left in its natural state except for the on-site MSHCP riparian/riverine mitigation area and temporary impacts, which will be subjected to restoration activities, further described in Section 7, Project Mitigation. The Project's temporary impacts will be included in the open space once restoration has been completed. All fuel modification, long-term maintenance, landscaping, and manufactured slopes are included as a permanent impact and are located outside of the open space area.

The Project's designated open space includes the following: (1) areas that will be placed under a conservation easement in perpetuity (i.e., over locations proposed for MSHCP Conservation and MSHCP riparian/riverine on-site mitigation areas); (2) areas proposed for long-term protection under a deed restriction (i.e., avoided MSHCP riparian/riverine resources); and (3) additional upland avoidance areas that are designated as Open Space by the Specific Plan (i.e., the Project's remaining open space). Table 2 summarizes the acreage of conservation and avoidance, and the type of protection proposed. The totals included in Table 2 are inclusive of temporary impacts because temporary impacts will be restored and protected following completion of restoration activities. The amount of temporary impact included in each total is denoted in parentheses next to each entry.

Table 2. Summary of the Protective Mechanisms for the Project's Open Space Areas (Acres)

Type of Protective Mechanism	Conservation Type	Total (Acreage of Temporary Impact)
Conservation Easement	MSHCP Conservation[1]	64.2 (2.9)
	MSHCP Riparian/Riverine On-Site Mitigation	1.8 (0)

Table 2. Summary of the Protective Mechanisms for the Project's Open Space Areas (Acres)

Type of Protective Mechanism	Conservation Type	Total (Acreage of Temporary Impact)
Deed Restriction	Avoided MSHCP Riparian/Riverine Resources	16.2 (0.1)
Specific Plan Designated Open Space	Open Space Avoidance Areas	221.6 (19.5)
	Total	303.8 (22.5)

Notes: MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
Totals may not sum precisely due to rounding.
[1] This total includes the 2.9 acres of on-site temporary impact areas that will be restored in place.

Apart from the open space, there are approximately 200 acres of fuel modification and manufactured slopes that are considered permanently impacted by the Project but could continue to provide habitat for species after Project build-out. Although these areas would require routine, long-term maintenance (e.g., thinning), they would be landscaped with an emphasis on using native species and would continue to facilitate species dispersal and foraging, as well as serve as a protective buffer between the hardscaped portions of the Project site and the 303.8 acres of open space.

Off-Site Improvement Areas

The Project would also include 12.7 acres of off-site areas to allow for Project-related improvements associated with fuel modification, transportation, and/or utilities. These off-site areas are located in four general locations as shown on Figure 1:

1. The Project would implement select areas of off-site fuel modification to ensure a minimum 100-foot-wide fuel management zone from the required setback location of each future structure. Off-site property to the north of the Project site within Yucaipa Valley Water District property would provide fuel management in association with their planned solar fields, but additional fuel modification would be required to maintain the full zone. The Project would require off-site fuel modification for select undeveloped areas along the northeastern Project boundary with the City of Yucaipa.
2. County Line Road improvements between the Project site and the I-10 interchange would involve redeveloping the existing roadway into a Modified Collector (60-foot right-of-way). The roadway would be widened within the existing right-of-way, consisting of a 48-foot-wide paved roadway section, curb-to-curb (i.e., 12-foot lanes each direction, one 12-foot center turn lane, and 6-foot bicycle lanes on each side) and unpaved right-of-way on either side of the curb. Additionally, recycled water lines would be constructed off site for Pressure Zone 11, traversing northeasterly from the Project site through a portion of County Line Road and into the existing recycled water and booster pump station located on West County Line Lane that is gated by Yucaipa Valley Water District.
3. Within the Yucaipa-Calimesa Joint Union School District property, potable water lines would be constructed off site for Pressure Zone 12, traversing northward from the Project site to W. Avenue L, east of the Mesa View Middle School parking lot and west of the mobile home park. This linear stretch is graded but largely unpaved. The potable water and recycled water lines would connect to existing infrastructure in W. Avenue L.
4. 7th Street would be developed at half-width along the eastern boundary of the Project site to its full 60-foot right-of-way. Improvements on the west side of 7th Street would extend from Sandalwood Drive to the north property line. Paving of the west side of the street would include curb/gutter and sidewalk improvements for a distance along the street frontage.

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2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the USFWS Migratory Birds Permit office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds, with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

2.1.3 Clean Water Act

Section 404

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

The definition of waters of the United States establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States"

(provided in 33 Code of Federal Regulations [CFR] Section 328.3[a]) has changed multiple times over the past few decades, starting with the United States v. Riverside Bayview Homes Inc. court ruling in 1985. Subsequent court proceedings, rule makings, and congressional acts in 2001 (*Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*), 2006 (*Rapanos v. United States*), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule [NWPR]), and 2021 (*Pasqua Tribe et al. v. United States Environmental Protection Agency* resulting in remand and vacatur of the NWPR and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation. On December 30, 2022, the agencies announced the final Revised Definition of "Waters of the United States" rule (Rule) (88 CFR 3004–3144). The Rule was published in the Federal Register on January 18, 2023, and became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the CWA for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule represents a re-expansion of federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule. The Rule also considers various subsequent court decisions including two notable Supreme Court decisions.

There are two key changes that the Rule incorporates. First, the Rule reinstates the "Significant Nexus" test. The "Significant Nexus" test refers to waters that either alone or in combination with similarly situated waters in the region significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372-69450). The "Significant Nexus" test attempts to establish a scientific connection between smaller water bodies, such as ephemeral or intermittent tributaries, and larger, more traditional navigable waters, such as rivers. Significant nexus evaluations take into consideration hydrologic and ecologic factors including, but not limited to, volume, duration, and the frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. Second, the Rule adopts the "Relatively Permanent Standard" test. To meet the "Relatively Permanent Standard," water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

On May 25, 2023, the Supreme Court issued its decision in *Sackett v. EPA* (U.S. Environmental Protection Agency), in which it rejected EPA's claim that "waters of the United States," as defined in the CWA, includes wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water[s] of the United States (i.e., a relatively permanent body of water connected to traditional interstate navigable waters); and (2) the wetland has a relatively permanent connection with that water, making it difficult to determine where the water ends and the wetland begins. The Rule will need to be modified by the Biden administration in light of this decision.

The term "wetlands" (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark" (OHWM) which is defined in 33 CFR 328.3(c)(7) 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 soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Section 401

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by SWRCB to the nine regional boards. The Santa Ana Regional Water Quality Control Board (RWQCB) has authority for Section 401 compliance in the Project area. A request for certification is submitted to the regional board at the same time that an application is filed with USACE. Based on the aquatic resources delineation there are no Waters of the U.S. within the Project area and therefore Section 401 of the CWA would not be applicable. The final aquatic resource impacts would be determined by the USACE through the Approved Jurisdictional Determination process.

2.2 State

2.2.1 California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Fish and Game Commission has the responsibility of maintaining a list of threatened and endangered species. CESA prohibits the take of state-listed threatened or endangered animals and plants unless otherwise permitted pursuant to CESA. Take under CESA is defined as any of the following: "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code Section 86). Unlike FESA, CESA does not include harassment or harm (e.g., habitat degradation) in its definition of take. Species determined by the State of California to be candidates for listing as threatened or endangered are treated as if listed as threatened or endangered and are, therefore, protected from take. Pursuant to CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species, or candidate species, could be potentially impacted by that project.

2.2.2 California Fish and Game Code

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. Toward that end, the CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Sections 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream or to the limit of the adjacent riparian vegetation, which may include

oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will 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. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the act as threatened species but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project applicant.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.3 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and the ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The State of California CEQA Guidelines (CEQA Guidelines) Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable

future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

2.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). SWRCB defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the SWRCB definition of wetlands includes the following:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
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
    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
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state 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" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

2.3 Local

2.3.1 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on the permanent conservation of 500,000 acres and the protection of 146 species, including 33 that are currently listed as threatened or endangered. The MSHCP is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities, including the City, to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts (RCA 2003).

The MSHCP serves as a habitat conservation plan (HCP) pursuant to Section 10(a)(1)(B) of FESA (16 USC 1531 et seq.) and a Natural Communities Conservation Plan under the Natural Community Conservation Planning Act of 2001 (California Fish and Game Code Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize "take" of plant and wildlife species identified within the plan area. USFWS and CDFW have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted "take authorization" for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP Conservation Areas, in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

The MSHCP is a "criteria-based plan" and does not rely on a hardline preserve map. Instead, within the MSHCP area, the MSHCP Reserve will be assembled over time from a smaller subset of the Plan Area, referred to as the "Criteria Area." The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (Criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-contiguous Habitat Blocks.

Local Development Mitigation Fee

In order to implement the goals and objectives of the Western Riverside MSHCP and to mitigate the impacts caused by new development, the MSHCP seeks to acquire and conserve certain lands that support covered species. A MSHCP Local Development Mitigation Fee is necessary to supplement the financing of the acquisition of lands supporting species covered by the MSHCP and to pay for new development's fair share of this cost (RCA 2003). The MSHCP Local Development Mitigation Fee assists in the maintenance of biological diversity and protects vegetation communities that are known to support threatened, endangered, or sensitive populations of plant and wildlife species.

2.3.2 Stephens' Kangaroo Rat Habitat Conservation Plan

The Stephens' Kangaroo Rat HCP describes the proposed conservation, mitigation, and monitoring measures to be implemented for the preservation of the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*). The Stephens' Kangaroo Rat HCP establishes a regional system of Core Reserves throughout western Riverside County for the specific conservation of Stephens' kangaroo rat and the ecosystem upon which it depends. A standard fee, known as the Development Mitigation Fee, is charged to development projects to supplement the financing of reserve management for the Stephens' Kangaroo Rat HCP.

The study area is outside of the Stephens' Kangaroo Rat HCP Core Reserve Area and is located outside the Stephens' Kangaroo Rat HCP fee area. However, because the Project is located within the Western Riverside MSHCP plan area, the Project has "take" coverage for any Stephens' kangaroo rat potentially occurring on the site through the Western Riverside MSHCP.

2.3.3 City of Calimesa General Plan

The City adopted their General Plan in 2014 and it has been used as the basis for standards for the development of public and private projects within the City. The General Plan planning area includes all land within the City's limits. The Project would be designed to be consistent with all the pertinent goals, objectives, and policies outlined in the General Plan (City of Calimesa 2014).

The City General Plan Policy RM-13 states that native oak trees should be preserved whenever feasible, and that if preservation is not possible, trees should be replaced with oak trees of the same species at a ratio of 1:1. This policy is implemented through the City's Oak Tree Preservation Ordinance (Chapter 18.80), which protects heritage oak trees, protected oak trees, and stands of oak trees (oak groves), which are defined as the following:

- **Heritage oak tree:** An oak tree of the genus *Quercus* other than a protected oak tree or scrub oak that has a trunk measuring 12 inches or more in diameter as measured 4.5 feet from the natural grade (i.e., diameter at standard height [DSH]).
- **Protected oak tree:** An oak tree of the genus *Quercus*, including Nuttall's scrub oak (*Quercus dumosa*), other than a heritage oak tree or scrub oak, that has a trunk measuring two inches or more in diameter as measured 4.5 feet from the natural grade (i.e., DSH).
- **Protected stand of oak trees (oak grove):** A cluster of four or more oak trees of the same genus *Quercus*, including Nuttall's scrub oaks.

Additionally, Section 18.70.120 of the City's zoning code outlines regulations for the removal or encroachment of any qualifying non-oak trees (i.e., qualifying means any non-oak tree with a diameter at standard height of 24 inches or greater). Encroachment is defined as any impact occurring within the protected zone of the tree (i.e., 5 feet of dripline or 15 feet of the trunk for oak trees and dripline or 25 feet of trunk for qualifying non-oak trees). Tree preservation guidelines require a permit, tree survey, and planting of replacement trees, and specific requirements for avoidance of impacts to trees that will be retained applies to all species of trees regulated under Chapter 18.80 and Section 18.70.120 of the City's zoning code.

2.3.4 City of Yucaipa Municipal Code

The City of Yucaipa requires an oak tree permit for the cutting, removal, encroachment into the protected zone, or relocation of any protected oak tree (City of Yucaipa Municipal Code 89.0515), which is defined as any oak tree of the Genus *Quercus*, except for scrub oak (*Quercus dumosa*), that exceeds 2 inches in DSH. For the purposes of the impact analysis, the scrub oak species *Quercus berberidifolia* is considered distinct from the scrub oak species *Quercus dumosa* and therefore *Quercus berberidifolia* is considered protected by the City of Yucaipa. The protected zone of a tree is defined as "a specifically defined area totally encompassing an oak tree … using the dripline as a point of reference, the protected zone shall commence at a point five feet (5') outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than fifteen feet (15') from the trunk of an oak tree" (City of Yucaipa Municipal Code 89.0505).

The City of Yucaipa has additional protections that regulate native non-oak trees and heritage trees. Specifically, a removal permit is required for the removal of any native tree with a DSH of 6 inches or greater, as well as for any heritage tree, which is defined as any tree that is in a linear planting of three or more trees that is 50 feet or greater in length within established windrows or parkway plantings (City of Yucaipa Municipal Code 89.0315). The City's regulations for coniferous trees require trees to be treated after removal to prevent the proliferation of pests (City of Yucaipa Municipal Code Division 9 Chapter 2). There are no regulated native non-oak trees, heritage trees, or conifers occurring in the off-site improvement areas in the City of Yucaipa. Therefore, these non-oak tree protections do not apply to the Project.

3 Methods

Data regarding biological resources present within the Project study area, which includes the Project site and off-site improvement areas, was obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail in this section. For purposes of this report, special-status resources are defined as follows:

- Special-status plant species include:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and protected under either CESA (California Fish and Game Code Section 2050 et seq.) or FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023a) with a CRPR of 1 or 2 (CNPS 2023a)
- Special-status wildlife species include:
  - Species designated as either rare, threatened, endangered, or fully protected by CDFW or USFWS and protected under either CESA (California Fish and Game Code Section 2050 et seq.) or FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Other species that are included on the CDFW Special Animals List (CDFW 2023b) as Species of Special Concern
- Special-status vegetation communities are those designated as sensitive by CDFW (CDFW 2023c)

3.1 Literature Review

Prior to conducting a field assessment, a literature search and database review were conducted by Dudek biologists to evaluate the natural resources found or potentially occurring within the study area. The database review included the most recent versions of the CNDDB and CDFW special-status species lists (CDFW 2023a; 2023b; 2023c; 2023d) and the CNPS Inventory (CNPS 2023a). These databases were reviewed to identify sensitive biological resources present or potentially present for the USGS 7.5-minute quadrangle on which the majority of the study area is located (El Casco) and the eight surrounding quadrangles (Sunnymead, Beaumont, Redlands, Yucaipa, Forest Falls, Perris, Lakeview, and San Jacinto). The USFWS occurrence data and critical habitat databases were queried using geographic information system (GIS) software based on a 5-mile buffer around the study area. Potential and/or historical drainages and aquatic features were investigated based on a review of USGS topographic maps (1:24,000-scale), aerial photographs, the USFWS National Wetland Inventory database (USFWS 2023a), the USGS National Hydrography Dataset (USGS 2023), and the Natural Resource Conservation Service's Web Soil Survey (USDA 2023a).

3.2 Field Surveys

Dudek conducted the following biological surveys between March 2022 and June 2023: vegetation mapping, aquatic resources delineation, focused surveys for special-status plants, and protocol surveys for burrowing owl (*Athene cunicularia*). Table 3 lists the dates, focus, scope, conditions, and personnel for each survey. Photographs of the study area can be found in Appendix B, Representative Photographs.

Table 3. Survey Details

Date	Biologist(s)	Survey Area/ Survey Type (if applicable)	Time	Conditions
Vegetation Mapping/Habitat Assessment				
2022-03-31	Anna Cassady, Sarah Greely	Project Site	8:13 AM–4:03 PM	50°F–58°F; 80%–100% cloud cover; 1–2 mph wind
2022-04-12	Alexandra Kookootsedes, Sarah Greely	Project Site	9:30 AM–4:30 PM	60°F–64°F; 0% cloud cover; 1–20 mph wind
2022-04-13	Dylan Ayers, Sarah Greely	Project Site	9:30 AM–3:49 PM	64°F–78°F; 0%–10% cloud cover; 3–5 mph wind
2022-04-15	Alexandra Kookootsedes, Sarah Greely	Project Site	7:42 AM–4:58 PM	51°F–70°F; 20%–80% cloud cover; 0–2 mph wind
2022-05-17	Sarah Greely	Project Site	8:40 AM–4:10 PM	56°F–74°F; 0%–100% cloud cover; 1–8 mph wind
2022-05-25	Sarah Greely	Project Site	8:26 AM–4:00 PM	76°F–87°F; 0% cloud cover; 0–1 mph wind
2022-05-27	Sarah Greely	Project Site	9:30 AM–4:07 PM	61°F–76°F; 0%–10% cloud cover; 3–5 mph wind
2023-04-12	Olivia Koziel, Sierra Lippert	Off-Site Improvement Area	10:00 AM–3:30 PM	65°F–68°F; 50%–70% cloud cover; 1–5 mph wind
2024-02-15	Olivia Koziel	Off-Site Improvement Area	9:03 AM–12:05 PM	58°F –60°F; 20%–50% cloud cover; 2–5 mph wind
Aquatic Resources Delineation				
2022-05-03	Anna Cassady, Britney Schultz	Project Site	10:00 AM–4:00 PM	55°F–72°F; 0%–70% cloud cover; 1–2 mph wind
2022-06-03	Britney Schultz, Callie Amoaku	Project Site	8:30 AM–3:45 PM	62°F–81°F; 0%–10% cloud cover; 0–2 mph wind
2022-06-15	Callie Amoaku, Kimberly Narel	Project Site	8:46 AM–2:03 PM	76°F–91°F; 0% cloud cover; 0–1 mph wind
	Dylan Ayers, Olivia Koziel	Project Site	8:30 AM–3:32 PM	76°F–94°F; 0% cloud cover; 0–3 mph wind
2022-06-16	Callie Amoaku, Kimberly Narel	Project Site	8:40 AM–2:10 PM	76°F–90°F; 0% cloud cover; 0–8 mph wind
	Dylan Ayers, Eilleen Salas	Project Site	9:05 AM–12:57 PM	81°F–90°F; 0% cloud cover; 0–3 mph wind
Rare Plants				
2022-04-19	Cody Schaaf, Kathleen Dayton, Olivia Koziel	Project Site	9:56 AM–5:24 PM	66°F–76°F; 0% cloud cover; 0–4 mph wind
2022-04-20	Cody Schaaf, Kathleen Dayton, Olivia Koziel	Project Site	7:48 AM–2:30 PM	51°F–66°F; 30%–100% cloud cover; 0–3 mph wind

Table 3. Survey Details

Date	Biologist(s)	Survey Area/ Survey Type (if applicable)	Time	Conditions
2022-04-26	Dylan Ayers, Eilleen Salas, Olivia Koziel, Shana Carey	Project Site	8:41 AM–3:00 PM	70°F–78°F; 20%–30% cloud cover; 1–2 mph wind
2022-04-27	Dylan Ayers, Eilleen Salas, Olivia Koziel, Shana Carey	Project Site	8:30 AM–3:29 PM	65°F–72°F; 0% cloud cover; 0–5 mph wind
2022-05-02	Jeannette Halderman, Kathleen Dayton	Project Site	9:42 AM–5:26 PM	59°F–73°F; 0% cloud cover; 0–10 mph wind
2022-05-03	Jeannette Halderman, Kathleen Dayton, Olivia Koziel, Tracy Park	Project Site	8:02 AM–4:24 PM	52°F–72°F; 0%–100% cloud cover; 0–4 mph wind
2022-05-04	Jeannette Halderman, Olivia Koziel, Tracy Park	Project Site	8:00 AM–2:30 PM	64°F–85°F; 0% cloud cover; 0–4 mph wind
2022-05-05	Jeannette Halderman, Shana Carey, Vir McCoy	Project Site	8:25 AM–3:15 PM	76°F–85°F; 0% cloud cover; 0–4 mph wind
2022-05-06	Olivia Koziel, Vir McCoy	Project Site	9:35 AM–2:20 PM	73°F–83°F; 0%–10% cloud cover; 0–3 mph wind
2022-05-09	Lasthenia Lee	Project Site	8:38 AM–5:17 PM	50°F–66°F; 40%–80% cloud cover
2022-05-10	Lasthenia Lee, Stephanie Hines	Project Site	7:30 AM–4:42 PM	52°F–68°F; 0%–20% cloud cover; 1–2 mph wind
2022-05-11	Lasthenia Lee, Stephanie Hines	Project Site	7:35 AM–5:13 PM	48°F–68°F; 1 mph wind
2022-05-12	Lasthenia Lee, Stephanie Hines	Project Site	7:05 AM–4:21 PM	55°F–78°F; 0% cloud cover; 0–1 mph wind
2022-05-13	Cecile Shohet, Cody Schaaf	Project Site	7:40 AM–12:15 PM	64°F–84°F; 0% cloud cover; 0–3 mph wind
2022-09-29	Kathleen Dayton, Olivia Koziel, Zarina Pringle	Project Site	7:45 AM–12:18 PM	70°F–95°F; 0%–10% cloud cover; 0–2 mph wind
2023-05-19	Zarina Pringle, Sarah Greely	Off-Site Improvement Area	7:56 AM–11:58 AM	61°F–73°F; 30%–100% cloud cover; 0–3 mph wind
Burrowing Owl Protocol Surveys				
2022-04-25	David Jirsa	Project Site; Pass 1, Burrow Mapping	5:45 AM–10:00 AM	57°F–76°F; 0% cloud cover; 0–2 mph wind
2022-04-26	David Jirsa, Kristopher Jerpseth, Rachael Smith	Project Site; Pass 1, Burrow Mapping	5:50 AM–10:00 AM	59°F–74°F; 30%–50% cloud cover; 0–4 mph wind

Table 3. Survey Details

Date	Biologist(s)	Survey Area/ Survey Type (if applicable)	Time	Conditions
2022-04-27	David Jirsa, Kristopher Jerpseth, Rachael Smith	Project Site; Pass 1, Burrow Mapping	5:50 AM–10:11 AM	48°F–59°F; 0% cloud cover; 0–4 mph wind
2022-04-28	David Jirsa, Rachael Smith	Project Site; Pass 1, Burrow Mapping	5:47 AM–10:12 AM	50°F–53°F; 100% cloud cover; 0–5 mph wind
2022-04-29	Rachael Smith	Project Site; Pass 1, Burrow Mapping	5:30 AM–10:00 AM	49°F–69°F; 10%–100% cloud cover; 1–4 mph wind
2022-05-02	David Jirsa, Eric Nicholson, Kristopher Jerpseth	Project Site; Pass 1, Burrow Mapping	5:45 AM–10:00 AM	57°F–68°F; 0%–100% cloud cover; 0–5 mph wind
2022-05-03	David Jirsa, Eric Nicholson, Kristopher Jerpseth	Project Site; Pass 1, Burrow Mapping	5:50 AM–10:05 AM	52°F–57°F; 100% cloud cover; 0–3 mph wind
2022-05-04	David Jirsa, Eric Nicholson, Kristopher Jerpseth	Project Site; Pass 1, Burrow Mapping	5:45 AM–10:00 AM	51°F–75°F; 0% cloud cover; 2–5 mph wind
2022-05-06	Olivia Koziel, Vir McCoy	Project Site; Pass 1, Burrow Mapping	8:17 AM–9:33 AM	69°F–73°F; 10% cloud cover; 0–2 mph wind
2022-06-02	Kristopher Jerpseth, Alex Chaney	Project Site; Pass 2	5:00 AM–10:00 AM	59°F–63°F; 10% cloud cover; 0 mph wind
2022-06-03	Kristopher Jerpseth, Alex Chaney	Project Site; Pass 2	5:15 AM–10:15 AM	53°F–61°F; 100% cloud cover; 0 mph wind
2022-06-22	Austin Robbins, Natalie Cibel, Shana Carey	Project Site; Pass 3	5:15 AM–10:00 AM	68°F–88°F; 10%–70% cloud cover; 0–5 mph wind
2022-06-23	Austin Robbins	Project Site; Pass 3	5:00 AM–9:46 AM	66°F–78°F; 0%–10% cloud cover; 1–2 mph wind
2022-07-21	Rachael Smith	Project Site; Pass 4	5:15 AM–10:00 AM	71°F–88°F; 0% cloud cover; 2–5 mph wind
2022-07-22	Rachael Smith	Project Site; Pass 4	5:15 AM–10:00 AM	75°F–83°F; 0%–30% cloud cover; 0–6 mph wind
2022-07-26	Angela Johnson, Brody Olson	Project Site; Pass 4	5:30 AM–10:00 AM	63°F–80°F; 10%–30% cloud cover; 0–4 mph wind
2023-04-12	Olivia Koziel, Sierra Lippert	Off-Site Improvement Area; Pass 1, Burrow Mapping	6:30 AM–10:00 AM	57°F–64.8°F; 70%–80% cloud cover; 0–3 mph wind
2023-05-12	Olivia Koziel	Off-Site Improvement Area; Pass 2	6:10 AM–9:24 AM	55°F–68°F; 40%–100% cloud cover; 1 mph wind

Table 3. Survey Details

Date	Biologist(s)	Survey Area/ Survey Type (if applicable)	Time	Conditions
2023-06-09	Olivia Koziel	Off-Site Improvement Area; Pass 3	6:25 AM–9:59 AM	53°F–65°F; 80%–100% cloud cover; 1 mph wind
2023-06-30	Kimberly Narel	Off-Site Improvement Area; Pass 4	7:30 AM–9:30 AM	71°F–80°F; 0% cloud cover; 0–4 mph wind

Notes: °F = degrees Fahrenheit; mph = miles per hour.

3.2.1 Vegetation Community and Land Cover Mapping

Vegetation communities and land uses within the study area were mapped in the field using Environmental Systems Research Institute (Esri) Collector, a mobile data collection application, on a digital aerial-based background. Following completion of the fieldwork, all vegetation linework was finalized using ArcGIS, and geographic information system coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the study area was determined.

Vegetation community classifications used in this report follow A Manual of California Vegetation, online edition (CNPS 2023b) and California Natural Community List (CDFW 2023c), where feasible, with modifications made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land uses) using Oberbauer et al. (2008). Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Each natural community was mapped to the association level, where feasible. These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages).

Minimum mapping units were established to standardize the scale and appropriate evaluation of stands, as recommended by the CDFW (2020). Mapping standards call for a minimum mapping unit of not greater than 10 acres for upland natural communities not considered sensitive, but the minimum mapping unit is usually 1 or 2 acres, and 0.25 acres for sensitive vegetation communities and wetland or riparian vegetation communities were used as minimum mapping units. Visible disturbance factors were also noted during vegetation mapping.

3.2.2 Flora

Latin and common names for plant species with a CRPR follow the CNPS Rare Plant Inventory (CNPS 2023a). For plant species without a CRPR, Latin names follow the Jepson Online Interchange for California Floristics (Jepson Flora Project 2023) and common names follow the California Natural Community List (CDFW 2023c) or the United States Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2023b).

3.2.3 Fauna

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. The site was visually scanned with and without binoculars to identify wildlife. Latin and common

names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2021) for birds, American Society of Mammologists (ASM 2023) for mammals, North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

3.2.4 Special-Status and Regulated Resources

3.2.4.1 Special-Status Plant Survey

Based on the results of the literature review discussed in Section 3.1, 15 special-status plant species were determined to have a moderate potential to occur within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions on site: chaparral sand-verbena (*Abronia villosa* var. *aurita*), Yucaipa onion (*Allium marvinii*), Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*), Nevin's barberry (*Berberis nevinii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), California satintail (*Imperata brevifolia*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), salt spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), and California screw moss (*Tortula californica*). Therefore, focused surveys were conducted for these species.

Field survey methods and mapping of rare plants conformed to CNPS Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). The 2022 surveys consisted of two survey passes, one in April/May and one in September, both within the Project site; the 2023 survey pass was conducted in May within all portions of the off-site improvement area except for County Line Road. Surveys were conducted at the appropriate phenological stage of the plant (blooming and fruiting) to detect and identify the target species; identifications were confirmed by reference checks at nearby known populations, further discussed in this section. The surveys were conducted by walking 20-meter (66-foot) transects within all suitable habitats to detect target species.

Plant species detected during the focused surveys were identified to subspecies or variety, if applicable and feasible, to determine sensitivity status. All plant species observed within the study area were noted, and plants that could not be identified in the field were collected and identified later using a microscope with taxonomic keys. Plants with a CRPR were also mapped if incidentally observed. The County Line Road portion of the off-site study area does not contain suitable habitat for special-status plants, and therefore rare plant surveys were not conducted. The remainder of the off-site study area did not contain suitable habitat for San Bernardino aster but contained potentially suitable habitat for other target species, and therefore only a May survey pass was conducted.

Narrow Endemic Plant Species and Criteria Area Plant Species Habitat Assessment and Focused Survey

Part of the study area is located within the MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA) for Yucaipa onion (synonym: Marvin's onion) and many-stemmed dudleya (*Dudleya multicaulis*). A portion of the study area is also located within the MSHCP Criteria Area Species Survey Area (CASSA) for Nevin's barberry, smooth tarplant, and round-leaved filaree (*California macrophylla*) (Figure 2, MSHCP Survey Areas – Plants). Per MSHCP Section 6.1.3 and Section 6.3.2, for areas within identified NEPSSA and CASSA survey areas, focused surveys shall be required where appropriate habitat is present. Therefore, the study area was assessed to determine if suitable habitat was present for these species, and if it was, focused surveys were conducted.

Reference Population Check

All reference population checks were conducted by Dudek botanists prior to initiating focused surveys within the study area to ensure surveys were conducted at the appropriate phenological stage of the target plant species. Smooth tarplant was observed in bloom near Lake Elsinore on March 31, 2022. White-bracted spineflower was observed on March 31, 2022, near Keenbrook Road in San Bernardino County with only two plants in bloom; most were still vegetative. Slender-horned spineflower was observed in bloom within the Upper Santa Ana River Wash Plan Preserve on April 6, 2022. Twenty Yucaipa onion individuals were observed in bloom on April 19, 2022, near San Gorgonio Memorial Park. Many-stemmed dudleya was observed in bloom on May 5, 2022, near Norco Ridge Ranch. Parry's spineflower was observed on April 14, 2022, by the Inland Empire Resource Conservation District near the Wilson III Basin in Yucaipa.

3.2.4.2 Burrowing Owl Protocol-Level Survey

The study area is located within a MSHCP habitat assessment area for burrowing owl (Figure 3, MSHCP Survey Areas – Burrowing Owl). Dudek conducted a Step I burrowing owl habitat assessment, a Step II-A focused burrow survey, and Step II-B focused burrowing owl surveys within the study area to determine the presence or absence of burrowing owl within the study area. These surveys were conducted in accordance with the Burrowing Owl Survey Instructions for the MSHCP Area (County of Riverside 2006), with modifications. Concurrent with the vegetation mapping, Dudek biologists walked the entire study area to identify areas with suitable burrowing owl habitat (i.e., relatively open habitat with low gradients and burrow resources). A Step II-A focused burrow survey and first pass of the Step II-B focused burrowing owl survey was conducted within suitable habitat to document and map all suitable burrows or burrow surrogates (i.e., ground-level cavities with openings of 4 inches in diameter or greater) using Esri Collector. Following the finalization of the burrow survey, the burrowing owl survey area was further refined to include all areas containing suitable burrows and suitable vegetation. The remaining three survey passes were conducted within the refined burrowing owl survey area. Dudek biologists walked a combination of parallel and meandering transects spaced no more than 20 meters (66 feet) apart. If observed, any burrowing owl sightings, occupied burrows, and burrows with burrowing owl sign were mapped and recorded. Due to the lack of legal access within a 500-foot buffer around the study area, the buffer area around the study area was visually surveyed from the boundary using binoculars. The County Line Road portion of the off-site study area does not contain suitable habitat (i.e., low cover vegetation and burrows with openings 4 inches or greater in diameter) for burrowing owl, and therefore burrowing owl surveys were not conducted within this portion of the study area.

The surveys were conducted when conditions were suitable for detecting owls (no rain or high winds [>20 miles mph], dense fog, or temperatures over 90°F). While the Burrowing Owl Survey Instructions for the MSHCP Area stipulates that all surveys must be conducted 1 hour prior to sunrise to 2 hours after sunrise, for efficiency purposes, Dudek modified this protocol and conducted all surveys between first light and 10:00 AM to be consistent with Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFG 2012).

3.2.4.3 Aquatic Resources Delineation

Before conducting fieldwork for the aquatic resources delineation, Dudek reviewed aerial maps from the National Wetlands Inventory (USFWS 2023a), the National Hydrography database (USGS 2023), the Natural Resource Conservation Service (USDA 2023a, 2023b), and historical aerials and topographic maps (Google Earth 2023; Historical Aerials Online 2023). Survey datasheets and forms are included in the Aquatic Resources Delineation Report, Appendix G of this report. The surveys were conducted on foot to visually cover the study area.

Dudek conducted a delineation of state and federal jurisdictional waters and wetlands within the study area in accordance with current policies. Federal wetlands were mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters were mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b). Waters of the state were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, adopted April 2, 2019. CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602.

To aid in the delineation and in conformance with the USACE Field Guide to the Ordinary High Water Mark, 20 OHWM datasheets were recorded within potential non-wetland waters within the study area to determine the OHWM indicators and widths of those features.

The limits of aquatic resources were collected in the field using a Trimble R1 GPS unit and Esri Field Maps mobile application with sub-meter accuracy. The geographic extents were digitized in a geographic information system based on the GPS data, and data was collected directly onto field maps into a Project-specific geographic information system using ArcGIS software.

3.2.5 Survey Limitations

Limitations of the field surveys include a diurnal bias for most species and the absence of focused trapping for mammals and reptiles, since trapping is generally only performed for select listed species. Surveys were conducted mostly during the daytime to maximize visibility and detection of plants and most animals. As such, birds represent the largest component of vertebrate fauna recorded during the surveys, as they are usually most active during daytime hours. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night, particularly bat species. Many species of reptiles and amphibians are similarly nocturnal and/or cryptic in their habits and are difficult to observe using standard meandering transects. However, despite these limitations, the survey work conducted in the study area provides an adequate overall assessment of faunal resources for the purposes of evaluating potential biological constraints.

Other limitations included limited access to the study area due to topography and terrain that prevented 100% visual coverage of the hillslopes throughout the study area. Therefore, the vegetation mapping included a desktop extrapolation of vegetation communities confirmed in the field through use of aerial signatures from high-resolution aerial mapping and topographic contours.

The average rainfall in 2022 was below average, which has potential to limit the growth of flora. However, initial botanical reference searches were conducted prior to focused sensitive plant surveys; these search results are discussed further in Section 3.2.4.1 of this report. Conditions were monitored prior to collecting data to ensure target species would be identifiable if present. Surveys for sensitive plant species adequately covered flora that are known to bloom within the vicinity.

4 Environmental Setting

The purpose of this section is to describe the general existing conditions within and adjacent to the study area to document the baseline conditions for this report and subsequent analysis.

4.1 Land Use

The study area predominantly encompasses undeveloped lands dominated by upland vegetation but is intersected by incised drainages and numerous dirt roads. The majority of the study area burned in 2017 and 2019 during the Palmer and Sandalwood Fires, respectively. Evidence of motor vehicle off-roading is present throughout the study area.

The study area is located south of a water treatment facility operated by Yucaipa Valley Water District and open space functioning as existing agricultural operations. To the east lies Mesa View Middle School, the I-10 Freeway, and commercial and residential development. To the west and south is undeveloped open space associated with the northern portion of San Timoteo Canyon.

4.2 Climate

The study area is located in the inland valley region of western Riverside County. Minimum and maximum air temperatures near the City range from 41°F to 103°F (CIMIS 2022). The average annual precipitation for the last 5 years is 14.3 inches (CIMIS 2022). Periods of extended drought are common throughout the region.

4.3 Geology and Topography

The study area is located just north of San Timoteo Canyon and north of the Badlands. Areas north of the study area comprise the City of Yucaipa and the foothills of San Bernardino National Forest.

While trails intersect the majority of the study area, the southwestern portion of the study area is subject to the highest disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils, where trails and several debris piles have formed. The study area's surface elevation ranges between approximately 2,000 and 2,300 feet above mean sea level (amsl) and gently slopes from the eastern and western sides towards the center of the study area where the primary drainage flows southwest towards San Timoteo Creek.

4.4 Soils

According to the U.S. Department of Agriculture Natural Resource Conservation Service's Web Soil Survey (USDA 2022a), the study area occurs within the San Bernardino County Southwestern Part Area (CA677) and Western Riverside Area (CA679) (USDA 2022a, USDA 2022b). The study area consists of 30 soil complexes. These soil types are summarized in Table 4 and described in more detail below, and are presented on Figure 4, Soils.

Table 4. Soils within the Study Area

Mapping Unit Symbol	Soil Name	Hydric Rating	Acreage
BaG	Badland	Partially Hydric	432.5
BvD3	Buren Loam, 5 to 15 Percent Slopes, Severely Eroded	Not Hydric	17.4
GmD	Gorgonio Gravelly Loamy Fine Sand, 2 to 15 Percent Slopes	Not Hydric	5.6
GyE2	Greenfield Sandy Loam, 15 to 25 Percent Slopes, Eroded	Not Hydric	13.7
GyC2	Greenfield Sandy Loam, 2 to 8 Percent Slopes, Eroded	Not Hydric	16.9
HcC	Hanford Coarse Sandy Loam, 2 to 8 Percent Slopes	Not Hydric	62.3
HcD2	Hanford Coarse Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	7.8
MeD	Metz Loamy Sand, Channeled, 0 to 15 Percent Slopes	Partially Hydric	0.8
PlB	Placentia Fine Sandy Loam, 0 to 5 Percent Slopes	Partially Hydric	3.9
PlD	Placentia Fine Sandy Loam, 5 to 15 Percent Slopes	Partially Hydric	0.7
RaB3	Ramona Sandy Loam, 0 to 5 Percent Slopes, Severely Eroded	Not Hydric	2.1
RaB2	Ramona Sandy Loam, 2 to 5 Percent Slopes, Eroded	Not Hydric	4.3
RmC	Ramona Sandy Loam, 2 to 9 Percent Slopes	Not Hydric	1.2
RaD2	Ramona Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	<0.1
RaD3	Ramona Sandy Loam, 8 to 15 Percent Slopes, Severely Eroded	Not Hydric	45.2
RmD	Ramona Sandy Loam, 9 to 15 Percent Slopes	Not Hydric	0.8
RdE3	Ramona Sandy Loam, Moderately Deep, 15 to 25 Percent Slopes, Severely Eroded	Not Hydric	8.2
RdD2	Ramona Sandy Loam, Moderately Deep, 8 to 15 Percent Slopes, Eroded	Not Hydric	172.9
ReC2	Ramona Very Fine Sandy Loam, 0 to 8 Percent Slopes, Eroded	Not Hydric	21.1
RfC2	Ramona Very Fine Sandy Loam, Moderately Deep, 0 to 8 Percent Slopes, Eroded	Not Hydric	54.0
SeC2	San Emigdio Fine Sandy Loam, 2 to 8 Percent Slopes, Eroded	Not Hydric	102.5
ScC	San Emigdio Fine Sandy Loam, 2 to 9 Percent Slopes	Not Hydric	2.0
SeD2	San Emigdio Fine Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	9.9
SgD2	San Emigdio Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	24.1
SaD	San Emigdio Sandy Loam, 9 to 15 Percent Slopes	Not Hydric	0.1
SmF2	San Timoteo Loam, 25 to 50 Percent Slopes, Eroded	Not Hydric	280.1
SgF2	San Timoteo loam, 30 to 50 percent slopes, eroded	Not Hydric	5.0
SmE2	San Timoteo Loam, 8 to 25 Percent Slopes, Eroded	Not Hydric	95.0
ShF	Saugus Sandy Loam, 30 to 50 Percent Slopes	Not Hydric	6.3
TeG	Terrace Escarpments	Not Hydric	46.0
TvC	Tujunga Loamy Sand, Channeled, 0 to 8 Percent Slopes	Partially Hydric	34.6
		Total	**1,475.8**

Notes: Shaded rows indicate hydric soils (USDA 2023b). Total may not sum due to rounding.

Badland map unit consists of land with a shallow depth (0 to 3 inches) to paralithic bedrock. This is descriptive of concave areas with unweathered bedrock with very high runoff and 30% to 70% slopes (USDA 2023a). This soil series accounts for approximately 30% or more of the study area.

Buren Series consists of well-drained, slow to moderately slowly permeable soils formed from igneous rock and other crystalline rocks. These soils are typically found within alluvial fans (USDA 2023a). This soil series makes up the northwestern portion of the study area.

Gorgonio Series consists of somewhat excessively drained soils formed from alluvium derived from granite (2023a). These soils are typically found within alluvial fans. Within the study area, this series is mapped as a small polygon in the northwest corner.

Greenfield Series consists of deep, well-drained soils formed in moderately coarse- and coarse-textured alluvium derived from granite and mixed rock sources (USDA 2023a). This series is located within the western portion of the study area.

Hanford Series consists of very deep, well-drained soils that form from coarse-textured alluvium that is dominated by granite. These soils are typically found within floodplains, alluvial fans, and streambeds (USDA 2023a). This soil series is located in a very small polygon on the southern border of the study area.

Metz Series consists of somewhat excessively drained soils formed from alluvium derived from sedimentary rock (USDA 2023a). These soils are typically found on alluvial fans. This soil series occurs as multiple small "finger" polygons along the southern border of the study area.

Placentia Series consists of well- or moderately well-drained soils formed in alluvium from granite or similar sources. These soils have a slightly acidic A horizon and are typically found within fans and terraces (USDA 2023a). This soil series makes up the western side of the study area.

Ramona Family Series consists of well-drained soils formed in alluvium derived mostly from granitic materials. Ramona soils are found on terraces and alluvial fans at elevations of 500 feet to 3,500 feet amsl, with slopes of 0% to 25%. The natural vegetation consists primarily of annual grasses, forbs, chamise (*Adenostoma fasciculatum*), sages (*Salvia* spp.), and California buckwheat (*Eriogonum fasciculatum*). Soils at the surface include sandy loam to very fine sandy loam with some loamy sand, gravelly sandy loam, and gravelly fine sandy loam (USDA 2023a). This soil series occurs throughout the study area.

San Emigdio Family Series consists of very deep, well-drained soils that form in dominantly sedimentary alluvium. San Emigdio soils are found on flood plains and alluvial fans at elevations of 100 feet amsl to 2,000 feet amsl. These soils have negligible to low runoff and moderately rapid permeability. These soils form the southeastern portion of the study area and are not considered hydric (USDA 2023b).

San Timoteo Series consists of well-drained soils formed from residuum weathered from sandstone (USDA 2023a). These soils typically occur on backslopes and side slopes of hills. This soil series occurs in all but the southwestern quadrant of the study area, occurring in narrow polygons on several slope variations.

Saugus Series consists of deep, well-drained soils formed from weakly consolidated sediments. These soils typically occur on terraces and foothills (USDA 2023a). This soil series occurs in the eastern portion of the study area and is located in-between the Crafton Series and Psamments, Fluvents, and Frequently flooded soils series.

Terrace Escarpments. These features are steep faces that separate a terrace from lower-elevation land. Typically, the faces consist of sandstone, hard shale, or hard, weather-resistant sandstone. Vegetation cover is usually sparse and composed of patchy grass, moss, lichens, or small shrubs (USDA 2023a).

Tujunga Series consists of very deep, somewhat excessively drained soils formed in alluvium from granitic sources. These soils typically occur on alluvial fans and floodplains, including urban areas (USDA 2023a). This soil series occurs in the northern portion of the study area.

4.5 Watersheds and Hydrology

The study area is within the Yucaipa Creek subwatershed, Hydrologic Unit Code (HUC) 12-180702030402, and the San Timoteo Canyon-San Timoteo Wash subwatershed HUC 12-180702030403, which lie within the Santa Ana subbasin (Figure 5, Hydrology). The Yucaipa Creek subwatershed is 45.6 square miles (29,266 acres) and contains Yucaipa Creek. Wilson Creek and Oak Glen Creek are also prominent features in the watershed, both flowing into Yucaipa Creek. Yucaipa Creek flows west and north through several downstream features before converging with the Santa Ana River. The Santa Ana River flows south and west, terminating at the Pacific Ocean. The San Timoteo Canyon-San Timoteo Wash subwatershed is 47.9 square miles (30,633 acres) and contains San Timoteo Wash. This subwatershed collects water from the City and the south side of San Timoteo Canyon. San Timoteo Wash flows west to join the Santa Ana River, which drains south and west to the Pacific Ocean.

The study area occurs entirely within the Santa Ana RWQCB's Water Quality Control Plan for the Santa Ana River Basin (Santa Ana RWQCB 1995), within the Santa Ana River watershed (Santa Ana River Hydrologic Unit 801.00), San Timoteo Hydrologic Area (801.60), and the Yucaipa, San Timoteo, and Beaumont Management Zones (801.61 and 801.62) (Santa Ana RWQCB 1995).

5 Results

This section describes the results of the literature review and field surveys within the study area.

5.1 Vegetation Communities and Land Covers

There were 33 vegetation communities or land cover types mapped within the study area. The spatial distribution of the vegetation communities and land covers are presented on Figure 6, Biological Resources. The acreages of the mapped vegetation alliances/associations and other land covers in the study area are presented in Table 5, including those that are considered sensitive biological resources by CDFW under CEQA per the California Natural Community List (CDFW 2023c) and the acreages of burned versus unburned vegetation communities. The term "semi-natural stands" instead of the term "alliance" is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009). The alliances/associations and other land covers are grouped in Table 5 by the generalized habitat types included on the study area vegetation map (Figures 6A through 6K, Biological Resources). Vegetation communities considered sensitive biological resources by CDFW under CEQA (CDFW 2023c) have a superscript 3 ([3]) at the end of the community name in Table 5.

CDFW rankings of 1, 2, or 3 are considered high priority for inventory or special status, and impacts to these communities typically require mitigation. The following eight vegetation communities all have a CDFW ranking of 3 and are therefore considered special status: arroyo willow thickets, basket bush–river hawthorn–desert olive patches, bush penstemon scrub, chamise–sage chaparral, Eastwood manzanita chaparral, hairy leaf–woolly leaf ceanothus chaparral, needle grass–melic grass grassland, and sugarbush chaparral.

Table 5. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Grass and Herb Dominated						
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	412.3	243.2	655.5
Needle grass–melic grass grassland[3]	*Nassella* spp.–*Melica* spp.	*Nassella pulchra–Avena* spp.–*Bromus* spp.	S3	0.6	0	0.6
Russian thistle–dyer's woad–fivehood bassia fields	*Salsola tragus–Isatis tinctoria–Bassia* spp. [pending]	*Salsola* spp.	SNA	0.6	0	0.6
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum* (*elongatum, nudum*)	*Corethrogyne filaginifolia*	S4	30.0	0	30.0
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*)	*Hirschfeldia incana*	SNA	12.6	0	12.6
		Grass and Herb Dominated Subtotal		*456.1*	*243.2*	*699.3*
Chaparral						
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	44.4	445.5	489.8
		Adenostoma fasciculatum–(Ceanothus tomentosus)	S5	3.4	21.0	24.4
		Adenostoma fasciculatum–(Lotus scoparius–Eriodictyon spp.*)*	S5	1.6	2.6	4.2
		Adenostoma fasciculatum–Eriogonum fasciculatum	S4	5.7	0.2	6.0
Chamise–sage chaparral	*Adenostoma fasciculatum–Salvia* spp.	*Adenostoma fasciculatum–Salvia mellifera*	S4	0	5.5	5.5
		Adenostoma fasciculatum – Salvia mellifera – Ceanothus crassifolius	S4	3.1	0	3.1
		Adenostoma fasciculatum–Salvia mellifera – Rhus ovata[3]	S3	0.1	0.3	0.4
Eastwood manzanita chaparral[3]	*Arctostaphylos glandulosa*	*Arctostaphylos glandulosa–Adenostoma fasciculatum–Quercus wislizeni*	S3	1.6	0	1.6

Table 5. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Hairy leaf–woolly leaf ceanothus chaparral[3]	*Ceanothus (oliganthus, tomentosus)*	*Ceanothus tomentosus*	S3	0.1	3.6	3.7
Hoary leaf ceanothus chaparral	*Ceanothus crassifolius*	*Ceanothus crassifolius–Adenostoma fasciculatum–Salvia mellifera*	S4	0	0.6	0.6
Scrub oak chaparral	*Quercus berberidifolia*	*Quercus berberidifolia–Adenostoma fasciculatum*	S4	6.8	0.9	7.7
Sugarbush chaparral[3]	*Rhus ovata*	*Rhus ovata*	S3	7.0	3.3	10.3
			Chaparral Subtotal	*73.7*	*483.6*	*557.3*
Riparian						
Arroyo willow thickets[3]	*Salix lasiolepis*	*Salix lasiolepis*	S3	0.1	0	0.1
Basket bush–river hawthorn – desert olive patches[3]	*Rhus trilobata–Crataegus rivularis– Forestiera pubescens*	*Sambucus nigra*	S3	2.0	0	2.0
			Riparian Subtotal	*2.2*	*0*	*2.2*
Scrub						
Black sage scrub	*Salvia mellifera*	*Salvia mellifera*	S4	2.6	0	2.6
		Salvia mellifera–Eriogonum fasciculatum/Bromus rubens	S4	0.5	0	0.5
Brittle bush scrub	*Encelia farinosa*	*Encelia farinosa*	S4	10.2	1.6	11.8
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp.	*Malacothamnus fasciculatus*	S4	20.0	16.1	36.1
Bush penstemon scrub[3]	*Keckiella antirrhinoides*	*Keckiella antirrhinoides*	S3	2.1	0.3	2.4
California buckwheat scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	S5	17.5	0	17.5
		Eriogonum fasciculatum–Encelia farinosa	S5	0.1	0	0.1
California sagebrush–(purple sage) scrub	*Artemisia californica–(Salvia leucophylla)*	*Artemisia californica–Lotus scoparius*	S5	1.0	0	1.0

Table 5. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Deer weed–silver lupine–yerba santa scrub	*Lotus scoparius–Lupinus albifrons– Eriodictyon* spp.	*Lotus scoparius*	S5	6.3	2.0	8.3
			Scrub Subtotal	*60.3*	*20.0*	*80.3*
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	21.7	15.1	36.7
			Woodland Subtotal	*21.7*	*15.1*	*36.7*
Unvegetated Wash and River Bottom						
Unvegetated wash and river bottom	NA		SNA	18.2	0.1	18.3
			Unvegetated Subtotal	*18.2*	*0.1*	*18.3*
Disturbed and Developed						
Urban/Developed	NA		SNA	17.5	0	17.5
Disturbed Habitat	NA		SNA	44.0	0	44.0
Ornamental Plantings	NA		SNA	4.3	15.9	20.2
			Disturbed and Developed Subtotal	*65.9*	*15.9*	*81.8*
			Grand Total	**698.0**	**777.8**	**1,475.8**

Notes: Totals may not sum precisely due to rounding.

1 The term "semi-natural stands" vs. alliance is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009).

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers and abbreviations have the following meanings (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
SNA = state ranking not assigned

3 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023c).

5.1.1 Grass and Herb Dominated

5.1.1.1 Non-native Grassland (40.000.00)

California non-native grassland or California annual grassland is described in the first edition of *A* Manual of California Vegetation (Sawyer et al. 2009) as being dominated by annual grasses and herbs in the ground layer including bromes (*Bromus* spp.), California poppy (*Eschscholzia californica*), filaree (*Erodium* spp.), lupines (*Lupinus* spp.), mustards (*Brassica* spp.), and wild oats (*Avena* spp.).

Vegetation community composition within the study area coincided with this vegetation community description, as no vegetation association or alliance in CNPS (2023b) appropriately characterized this type of vegetation. The community in CNPS (2023) nearest to describing vegetation on the site is annual brome grasslands. This community is characterized by the dominance of several species of annual brome grasses, wild oats, filaree, mouse barley (*Hordeum murinum*), and shortpod mustard (*Hirschfeldia incana*). Although annual brome grasses and wild oats are the dominant plant species in this community composition, native annual forbs also constitute some cover.

5.1.1.2 Needle Grass – Melic Grass Grassland (41.151.00)

The needle grass – melic grass grassland has an open to continuous canopy less than 1 meter (3.3 feet) in height, and emergent trees may be present at low cover (CNPS 2023b).

The needle grass – melic grass grassland alliance is ranked by the CDFW (2023d) as a G3S3 alliance. This ranking indicates that globally and within California the alliance is considered vulnerable to extirpation or extinction (CDFW 2023c; NatureServe 2023). Therefore, this alliance is considered a sensitive natural community by CDFW.

Nassella pulchra – Avena spp.– *Bromus* spp. is the only association mapped within the needle grass – melic grass grassland alliance within the study area. On site, needle grass – melic grass grassland comprises one small linear patch in the northeastern portion of the study area adjacent to a paved road. Associated species observed within this alliance in the field included purple needlegrass, red brome (*Bromus rubens*), soft brome (*Bromus hordeaceus*), sand-aster (*Corethrogyne filaginifolia*), and Maltese star-thistle (*Centaurea melitensis*).

5.1.1.3 Russian Thistle – Dyer's Woad – Fivehood Bassia Fields (42.015.00)

The Russian thistle – dyer's woad – fivehood bassia fields herbaceous semi-natural alliance includes prickly Russian thistle (*Salsola tragus*), dyer's woad (*Isatis tinctoria*), fivehorn smotherweed (*Bassia hyssopifolia*), or burningbush (*Kochia scoparia* ssp. *scoparia*) as the dominant or co-dominant species in the herbaceous layer (CNPS 2023b).

The Russian thistle – dyer's woad – fivehood bassia alliance is ranked by CDFW as a semi-natural alliance and does not have specific global or state rankings.

The only association within the Russian thistle – dyer's woad – fivehood bassia fields alliance within the study area is *Salsola* spp. On site, Russian thistle – dyer's woad – fivehood bassia fields comprise one small patch in the northeastern portion of the study area. Associated species observed within this alliance in the field included short-pod mustard, prickly Russian thistle, California buckwheat, and chamise.

5.1.1.4 Sand-Aster and Perennial Buckwheat Fields (32.230.00)

The sand-aster and perennial buckwheat fields alliance communities include sand-aster, longstem buckwheat (*Eriogonum elongatum*), or naked buckwheat (*Eriogonum nudum*) as the dominant or co-dominant herb in the canopy. The herbaceous layer cover is open to intermittent with a canopy less than 1 meter (3.3 feet) in height (CNPS 2023b).

The sand-aster and perennial buckwheat fields alliance is ranked by CDFW (2023d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The only association within the sand-aster and perennial buckwheat fields alliance within the study area is *Corethrogyne filaginifolia*. On site, the sand-aster and perennial buckwheat fields alliance comprises several small to medium patches evenly scattered around the western half of the study area. Associated species observed within this alliance in the field included California buckwheat, non-native grasses, and pinebush (*Ericameria pinifolia*).

5.1.1.5 Upland Mustards or Star Thistle Fields (42.013.00)

The upland mustards or star thistle fields alliance communities include black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), Italian plumeless thistle (*Carduus pycnocephalus*), Maltese star-thistle, yellow star-thistle (*Centaurea solstitialis*), artichoke thistle (*Cynara cardunculus*), carnation spurge (*Euphorbia terracina*), short-pod mustard, dyer's woad, radish (*Raphanus sativus*), or similar ruderal forbs that are dominant in the herbaceous layer. Emergent trees and shrubs may be present at low cover. The upland mustards or star thistle fields alliance has an open to continuous canopy less than 3 meters (9.8 feet) in height (CNPS 2023b).

The upland mustards or star thistle fields alliance is a semi-natural alliance, and as such it is included in the California Natural Community List, but it is not ranked and is denoted as GNA/SNA (global/state rank not applicable) (CDFW 2023c); therefore, this community is not considered sensitive under CEQA.

The only association within the upland mustards or star thistle fields alliance within the study area is *Hirschfeldia incana.* On site, the upland mustards or star thistle fields alliance comprises several small to medium patches sparsely scattered across the central portion of the study area, with only one or two small patches in the western and eastern portions of the study area. Associated species observed within this alliance in the field included sand-aster, Maltese star-thistle, and various non-native grasses.

5.1.2 Chaparral

5.1.2.1 Chamise Chaparral (37.101.00)

The chamise chaparral alliance includes chamise as the dominant shrub with an intermittent to continuous canopy of less than 4 meters (13 feet) in height (CNPS 2023b).

The chamise chaparral alliance is ranked by CDFW (2023d) as a G5S5 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2023c; NatureServe 2023); therefore, the community is not considered sensitive under CEQA.

The following associations within the chamise chaparral alliance were mapped within the study area: Adenostoma fasciculatum; *Adenostoma fasciculatum* – (*Ceanothus tomentosus*); *Adenostoma fasciculatum* – (*Lotus scoparius* – *Eriodictyon* spp.); and *Adenostoma fasciculatum* – *Eriogonum fasciculatum*.

Associated species observed in the field within the *Adenostoma fasciculatum* association include bush mallow (*Malacothamnus fasciculatus*), deer weed (*Acmispon glaber*), sugarbush (*Rhus ovata*), blue elderberry (*Sambucas mexicana*), and non-native grass species. Associated species observed in the field within the *Adenostoma fasciculatum* – *(Ceanothus tomentosus)* association include woolly leaf ceanothus (*Ceanothus tomentosus*), sugarbush, black sage (*Salvia mellifera*), deer weed, and non-native grass species. Associated species observed in the field within the *Adenostoma fasciculatum* – *(Lotus scoparius* – *Eriodictyon* spp.*)* association include deer weed, California buckwheat, and non-native grass species. Associated species observed in the field within the *Adenostoma fasciculatum* – *Eriogonum fasciculatum* association include California buckwheat and non-native grass species.

On site, chamise chaparral is ubiquitous in large to medium patches throughout the majority of the study area and is primarily distributed along the numerous drainages found within the study area.

5.1.2.2 Chamise – Sage Chaparral (37.110.00)

In the chamise – sage chaparral alliance community, chamise, white sage (*Salvia apiana*), and black sage are co-dominant in the shrub canopy. The chamise – sage chaparral alliance has an open to continuous shrub canopy less than 3 meters (9.8 feet) in height, with a sparse to intermittent herbaceous later (CNPS 2023b).

The chamise – sage chaparral alliance is ranked by the CDFW (2023d) as a G4S4 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2023c; NatureServe 2023).

The following associations within the chamise – sage chaparral alliance were mapped within the study area: *Adenostoma fasciculatum – Salvia mellifera, Adenostoma fasciculatum – Salvia mellifera – Ceanothus crassifolius, and Adenostoma fasciculatum – Salvia mellifera – Rhus ovata*.

The *Adenostoma fasciculatum – Salvia mellifera – Rhus ovata* association is ranked as G3S3 alliance by CDFW (2023d) despite the overall alliance's G4S4 ranking. This association is ranked as sensitive by the CDFW (2023d).

Associated species observed in the field within the *Adenostoma fasciculatum – Salvia mellifera* association include black sage, bush mallow, sugarbush, *phacelia* spp., hairy horsebrush (*Tetradymia comosa*), and non-native grass species. Species observed in the field within the *Adenostoma fasciculatum – Salvia mellifera – Ceanothus crassifolius* association include chamise, black sage, and hoary leaf ceanothus (*Ceanothus crassifolius*). Associated species observed in the field within the *Adenostoma fasciculatum – Salvia mellifera – Rhus ovata* association include hollyleaf buckthorn (*Rhamnus pilosa*), California sagebrush (*Artemisia californica*), black sage, short-pod mustard, and non-native grass species. On site, the chamise – sage chaparral alliance comprises three small- to medium-sized patches in the northwestern portion of the study area, and there are two other small patches in the central portion of the study area near the southern border of the Project boundary.

5.1.2.3 Eastwood Manzanita Chaparral (37.302.00)

The Eastwood manzanita chaparral alliance communities include Eastwood manzanita (*Arctostaphylos glandulosa*) as the dominant or co-dominant shrub in the canopy. The Eastwood manzanita chaparral alliance has a continuous canopy less than 3 meters (9.8 feet) in height and may be two tiered. The herbaceous layer is sparse or absent (CNPS 2023b).

The Eastwood manzanita chaparral alliance is ranked by the CDFW (2023d) as a G4S3 alliance. This ranking indicates that globally the association is apparently secure, but vulnerable within California (CDFW 2023c; NatureServe 2023). The only association within the Eastwood manzanita chaparral alliance is *Arctostaphylos glandulosa – Adenostoma fasciculatum – Quercus wislizeni*. This association is ranked as G3S3, despite the alliances overall's G4S3 ranking, and is considered sensitive by CDFW (2023d).

On site, the Eastwood manzanita – chaparral alliance comprises a single small patch in the northwestern portion of the study area. Associated species observed within this alliance in the field included chamise and deer weed.

5.1.2.4 Hairy Leaf – Woolly Leaf Ceanothus Chaparral (37.207.00)

The hairy leaf – woolly leaf ceanothus chaparral alliance communities include hairy ceanothus (*Ceanothus oliganthus*) or woolly leaf ceanothus as the dominant or co-dominant shrub in the canopy. The hairy leaf – woolly leaf ceanothus chaparral alliance has a continuous to intermittent shrub canopy less than 4 meters (13 feet) in height, with a sparse herbaceous layer (CNPS 2023b).

The hairy leaf – woolly leaf ceanothus chaparral alliance is ranked by the CDFW (2023d) as a G3S3 alliance. This ranking indicates that globally and within California the alliance is considered vulnerable to extirpation or extinction. (CDFW 2023c; NatureServe 2023). Therefore, this alliance is considered a sensitive natural community by CDFW. The only association within the hairy leaf – woolly leaf ceanothus chaparral alliance in the study area is *Ceanothus tomentosus*. This association and all others in the alliance are ranked as sensitive by CDFW (2023d).

On site, the hairy leaf – woolly leaf ceanothus chaparral comprises a few small- to medium-sized patches concentrated in the southwestern corner of the study area. Associated species observed within this alliance in the field included bush mallow, redberry buckthorn (*Rhamnus crocea*), chamise, and black sage.

5.1.2.5 Hoary Leaf Ceanothus Chaparral (37.208.00)

The hoary leaf ceanothus chaparral alliance communities include hoary leaf ceanothus as the dominant or co-dominant shrub in an intermittent to continuous canopy less than 3.5 meters (11.5 feet) in height (CNPS 2023b).

The hoary leaf ceanothus chaparral alliance is ranked by CDFW (2023d) as a G4S4 alliance. This ranking indicates that globally and within California the alliance is apparently secure (CDFW 2023c; NatureServe 2023).

The only association within the hoary leaf ceanothus chaparral alliance within the study area is *Ceanothus crassifolius – Adenostoma fasciculatum – Salvia mellifera.* On site, the hoary leaf ceanothus chaparral alliance comprises one small patch in the northwestern portion of the study area. Associated species observed within this alliance in the field included chamise and black sage.

5.1.2.6 Scrub Oak Chaparral (37.407.00)

The scrub oak chaparral alliance communities include scrub oak as the dominant or co-dominant shrub in the canopy. Scrub oak chaparral has a continuous shrub canopy less than 6 meters (19.7 feet) in height, with a variable ground layer (CNPS 2023b).

The scrub oak chaparral alliance is ranked by CDFW (2023d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The only association within the scrub oak chaparral alliance within the study area is *Quercus berberidifolia – Adenostoma fasciculatum*. On site, scrub oak chaparral comprises a few small- to medium-sized patches sparsely scattered around the eastern portion of the study area. Associated species observed within this alliance in the field included chamise, redberry buckthorn, and various non-native grass species.

5.1.2.7 Sugarbush Chaparral (37.801.00)

The sugarbush chaparral alliance communities include sugarbush as the dominant or co-dominant shrub in an open to continuous canopy less than 5 meters (16.5 feet) in height (CNPS 2023b).

The sugarbush chaparral alliance is ranked by the CDFW (2023d) as a G4S4 alliance. This ranking indicates that globally and within California the alliance is apparently secure (CDFW 2023c; NatureServe 2023). However, this alliance is considered sensitive by the CDFW (2023d). The only association within the sugarbush chaparral alliance within the study area is *Rhus ovata*. This association is ranked by the CDFW as G3S3 and sensitive despite the alliance's overall G4S4 ranking. This association and all others within this alliance are ranked as sensitive by the CDFW (2023d).

On site, the sugarbush chaparral alliance comprises several medium-sized patches primarily found around the northern edge of the study area. Associated species observed within this alliance in the field included deer weed, chamise, blue elderberry, and various non-native grass species.

5.1.3 Riparian

5.1.3.1 Arroyo Willow Thickets (61.201.00)

Arroyo willow thickets feature arroyo willow as the dominant or co-dominant shrub or tree in the canopy. Arroyo willow thickets has an open to continuous canopy less than 10 meters (33 feet) in height, with a variable ground layer.

CDFW (2023d) and CNPS (2023) rank arroyo willow thickets alliance as an G4S4 community, indicating it is apparently secure both globally and within California. However, the arroyo willow thickets alliance is considered sensitive as a riparian vegetation community by the CDFW (2023d).

On site, arroyo willow thickets comprise one small patch in the northeastern portion of the study area. The only association within the arroyo willow thickets alliance in the study area is *Salix lasiolepis*. The only species observed within this association in the field was arroyo willow (*Salix lasiolepis)*.

5.1.3.2 Basket Bush – River Hawthorn – Desert Olive Patches (63.410.00)

Basket bush – river hawthorn – desert olive patches alliance communities include desert olive (*Forestiera pubescens*), skunkbush sumac (*Rhus trilobata*), and/or blue elderberry as the dominant or co-dominant shrub in the canopy. Basket bush – river hawthorn – desert olive patches alliance has an intermittent to continuous shrub canopy less than 5 meters (16.4 feet) in height, with a sparse to intermittent herbaceous layer (CNPS 2023b).

The basket bush – river hawthorn – desert olive patches alliance is ranked by CDFW (2023d) as a G4S3 alliance. This ranking indicates that globally this community is apparently secure, but within California the alliance is considered vulnerable and at risk (CDFW 2023c; NatureServe 2023). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

On site, the basket bush – river hawthorn – desert olive patches alliance comprises three small patches near the southeastern edge of the study area. Associated species observed within this alliance in the field included blue elderberry, pinebush, toyon (*Heteromeles arbutifolia*), and tarragon (*Artemisia dracunculus*).

5.1.4 Scrub

5.1.4.1 Black Sage Scrub (32.020.00)

Black sage scrub alliance communities include black sage as dominant or co-dominant in the shrub canopy. Black sage scrub has an intermittent to continuous shrub canopy less than 2 meters (7 feet) in height with a variable ground layer (CNPS 2023b).

The black sage scrub alliance is ranked by the CDFW (2023d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The following associations within the black sage scrub alliance were mapped within the study area: *Salvia mellifera,* and *Salvia mellifera – Eriogonum fasciculatum / Bromus rubens*. Associated species observed in the field within the *Salvia mellifera* association include other mixed chaparral species and non-native grass species. Associated species observed in the field within the *Salvia mellifera – Eriogonum fasciculatum / Bromus rubens* association include California buckwheat, Pomona milkvetch (*Astragalus pomonensis*), pinebush, short-pod mustard, and non-native grass species.

On site, the black sage scrub alliance comprises two small patches in the northwestern portion of the study area and one small patch in the northeastern portion of the study area.

5.1.4.2 Brittle Bush Scrub (33.030.00)

The brittle bush (*Encelia farinosa*) scrub alliance communities include brittle bush as the dominant or co-dominant shrub in the canopy. Brittle bush scrub has an open to intermittent shrub canopy less than 2 meters (6.6 feet) in height, with an open herbaceous layer of seasonal annuals (CNPS 2023b).

The brittle bush scrub alliance is ranked by the CDFW (2023d) as a G5S4 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure, and within California it is apparently secure (CDFW 2023c; NatureServe 2023). Therefore, this community is not considered sensitive under CEQA.

The only association mapped within the brittle bush scrub alliance in the study area is *Encelia farinosa.* On site, brittle bush scrub comprises several small- to medium-sized patches mainly concentrated along a paved road in the eastern corner of the study area. Associated species observed within this alliance in the field included Pomona milkvetch, sand-aster, short-pod mustard, deer weed, and California sagebrush.

5.1.4.3 Bush Mallow Scrub (45.455.00)

Bush mallow scrub alliance communities in Southern California include bush mallow or Indian Valley bush mallow (*Malacothamnus aboriginum*) as dominant or co-dominant in the shrub canopy. Bush mallow scrub has a two-tiered open to intermittent shrub canopy less than 3 meters (10 feet) in height, with a sparse ground layer (CNPS 2023b).

The bush mallow scrub alliance is ranked by CDFW (2023d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The only association within the bush mallow scrub alliance in the study area is *Malacothamnus fasciculatus*. On site, bush mallow scrub comprises several medium-sized patches sparsely scattered throughout the central and western portions of the study area. Associated species observed within this alliance in the field include chamise, redberry buckthorn, sugarbush, deer weed, and blue elderberry.

5.1.4.4 Bush Penstemon Scrub (32.065.00)

The bush penstemon scrub alliance community features yellow bush penstemon (*Keckiella antirrhinoide*s) as the dominant or co-dominant shrub in the canopy. The bush penstemon scrub alliance has a continuous and two-tiered shrub canopy less than 2 meters (6.6 feet) in height, with a variable ground layer (CNPS 2023b).

The bush penstemon scrub alliance is ranked by the CDFW (2023d) as a G3S3 alliance. This ranking indicates that globally and within California the alliance is considered vulnerable to extirpation or extinction (CDFW 2023c; NatureServe 2023). Therefore, this alliance is considered a sensitive natural community by CDFW.

The only association within the bush penstemon scrub alliance is *Keckiella antirrhinoide*s. On site, bush penstemon scrub comprises four small patches scattered in the western portion of the study area. Associated species observed within this alliance in the field included sugarbush, redberry buckthorn, woolly leaf ceanothus, hoary leaf ceanothus, chamise, black sage, and deer weed.

5.1.4.5 California Buckwheat Scrub (32.040.00)

California buckwheat scrub alliance communities include California buckwheat as the dominant or co-dominant shrub in the canopy. California buckwheat scrub has a continuous or intermittent shrub canopy less than 2 meters (7 feet) in height, with a variable ground layer that may be grassy (CNPS 2023b).

The California buckwheat scrub alliance is ranked by CDFW (2023d) as a G5S5 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure (CDFW 2023c; NatureServe 2023), and within California the alliance is secure; therefore, this community is not considered sensitive under CEQA.

The following associations within the California buckwheat scrub alliance were mapped in the study area: *Eriogonum fasciculatum* and *Eriogonum fasciculatum – Encelia farinosa.* Associated species observed in the field within the *Eriogonum fasciculatum* association included bromes, *Phacelia* spp., bush mallow, sand-aster, and black sage. Associated species observed in the field within the *Eriogonum fasciculatum – Encelia farinosa* association included black sage, Pomona milkvetch, and non-native grass species.

On site, the majority of the California buckwheat scrub alliance is scattered in several small- to medium-sized patches in the southeastern portion of the study area. There are three more small patches in the northwestern corner of the study area.

5.1.4.6 California Sagebrush – Purple Sage Scrub (32.015.00)

Purple sage scrub alliance communities include purple sage (*Salvia leucophylla*) or California sagebrush as dominant or co-dominant in the shrub canopy. Purple sage scrub has an intermittent to continuous shrub canopy less than 2 meters (7 feet) in height with a variable ground layer (CNPS 2023b).

The purple sage scrub alliance is ranked by the CDFW (2023d) as a G5S5 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2023c; NatureServe 2023).

There is one association within the purple sage scrub alliance in the study area: *Artemisia californica – Lotus scoparius.* On site, purple sage scrub comprises two small patches in the northwestern corner of the study area. Associated species observed within this alliance in the field included California sagebrush, deer weed, sand-aster, California buckwheat, red brome, and short-pod mustard.

5.1.4.7 Deer Weed – Silver Lupine – Yerba Santa Scrub (37.070.00)

The deer weed–silver lupine–yerba santa scrub alliance communities include tree poppy (*Dendromecon rigida*), yerba santa (*Eriodictyon californicum*), thickleaf yerba santa (*Eriodictyon crassifolium*), poodle-dog bush (*Eriodictyon parryi*), deer weed, and/or silver lupine (*Lupinus albifrons*) as the dominant shrub in the canopy. The deer weed – silver lupine – yerba santa scrub alliance has an open to intermittent shrub canopy that can be two tiered and is less than 3 meters (9.8 feet) in height, with a sparse to intermittent herbaceous layer (CNPS 2023b).

The deer weed – silver lupine – yerba santa scrub alliance is ranked by CDFW (2023d) as a G5S5 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The only association within the deer weed – silver lupine – yerba santa scrub alliance is *Lotus scoparius.* On site, deer weed – silver lupine – yerba santa scrub comprises several small to medium patches mainly in the western portion of the study area. Associated species observed in the field within the deer weed – silver lupine – yerba santa scrub association included chamise, black sage, sugarbush, sand-aster, and non-native grass species.

5.1.5 Woodland

5.1.5.1 Coast Live Oak Woodland and Forest (71.060.00)

Coast live oak woodland and forest alliance communities include coast live oak (*Quercus agrifolia*) as the dominant or co-dominant tree in the canopy. The coast live oak woodland and forest alliance has an open to continuous or savanna-like canopy less than 30 meters (98.4 feet) in height, with a sparse to intermittent shrub layer and a sparse or grassy herbaceous layer (CNPS 2023b).

The coast live oak woodland alliance is ranked by CDFW (2023d) as a G5S4 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure, and within California it is apparently secure (CDFW 2023c; NatureServe 2023); therefore, this community is not considered sensitive under CEQA.

The only association within the coast live oak woodland and forest alliance is *Quercus agrifolia* which is ranked by CDFW (2023d) as a G5S5. On site, the coast live oak woodland and forest association comprises several small to medium, generally long narrow sections, which are predominantly located along the upland banks of the deeply incised drainages in the northeastern portion of the Project site. The community also forms isolated patches in the northern portion of the Project site. Species observed within this association include redberry buckthorn, scrub oak, chamise, sugarbush, blue elderberry, and non-native grass species.

5.1.6 Unvegetated

5.1.6.1 Unvegetated Wash and River Bottom

Unvegetated wash and river bottom is not recognized by CDFW (2023d); however, unvegetated wash and river bottom may be jurisdictional by RWQCB pursuant to Porter–Cologne Act or CDFW pursuant to Section 1602 of the California Fish and Game Code. Thus, unvegetated wash and river bottom may be considered a sensitive vegetation community under CEQA.

The unvegetated wash and river bottom within the study area consisted of several ephemeral unvegetated channels that generally run northeast to southwest throughout the study area.

5.1.7 Disturbed and Developed

5.1.7.1 Disturbed Habitat

Although not recognized by the Natural Communities List (CDFW 2023c), disturbed habitat refers to areas that have had physical anthropogenic disturbance and, as a result, cannot be identified as a native or naturalized vegetation association. However, these areas do have a recognizable soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

Within the study area, disturbed habitat includes the numerous existing dirt roads that run throughout the study area. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

5.1.7.2 Urban/Developed Land

Although not recognized by the Natural Communities List (CDFW 2023c), urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Within the study area, urban/developed land consists of paved roads, including Sandalwood Drive running east/northwest near the western border of the study area, and West County Line Road running east/west in the central northern portion of the study area. Additionally, there are a few small sections of the study area that overlap with residential and commercial areas in the northeastern corner of the study area.

Urban/Developed is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

5.1.7.3 Ornamental Plantings

Ornamental plantings refer to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property or parks.

Ornamental plantings are not a listed vegetation community under the California Natural Community List (CDFW 2023c), but it has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

Within the study area, ornamental plantings occur in a few clustered areas across the site. Species associated with the ornamental plantings include olive (*Olea europaea*), Peruvian peppertree (*Schinus mole*), Brazilian peppertree (*Schinus terebinthifolius*), tree of heaven (*Ailanthus altissima*), and eucalyptus (*Eucalyptus* sp.).

5.2 Plants and Wildlife Observed

5.2.1 Plants

A total of 234 species of native or naturalized plants, 164 native (70%) and 70 non-native (30%), were observed within the study area. A list of all plant species observed by Dudek biologists is provided in Appendix C, Plant Compendium.

5.2.2 Wildlife

A total of 76 wildlife species, consisting of 73 native species (96%) and 3 non-native species (4%), were recorded within the study area or vicinity during surveys (Appendix D, Wildlife Compendium). Birds commonly detected on or in the immediate vicinity of the study area included lesser goldfinch (*Spinus psaltria*), common raven (*Corvus corax*), California towhee (*Melozone crissalis*), and red-tailed hawk (*Buteo jamaicensis*). All other bird species observed are listed in Appendix D. Mammals detected included bobcat (*Lynx rufus*), desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), and California ground squirrel (*Otospermophilus beecheyi*). Reptiles detected included western fence lizard (*Sceloporus occidentalis*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), common side-blotched lizard (*Uta stansburiana*), tiger whiptail (*Aspidoscelis tigris*), coachwhip (*Coluber flagellum*), red diamondback rattlesnake (*Crotalus ruber*), and gophersnake (*Pituophis catenifer*).

5.3 Special-Status and Regulated Resources

Appendix E, Special-Status Plant Species Potential to Occur and Appendix F, Special-Status Wildlife Potential to Occur, provide tables of all special-status species (plants and wildlife, respectively) whose geographic ranges fall within the general study area vicinity. Special-status species' potential to occur within the study area were evaluated based on known species distribution, species-specific habitat preferences, and Dudek biologists' knowledge of regional biological resources. Species potentially occurring within the study area are identified as having moderate or high potential to occur based on habitat conditions on site, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur.

5.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and species with a CRPR of 1 or 2. Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur within the study area. Each special-status plant species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation.

Listed species with any potential to occur and non-listed special-status species with a moderate or high potential to occur are discussed herein. Those special-status plant species that occur in the region but are not expected or have low potential to occur in the study area due to a lack of suitable habitat, the study area being located outside of the species' known geographic or elevation range, or not being observed during the focused 2022 and 2023 special-status plant survey are also included in Appendix E; however, these species are not discussed further because no significant direct or indirect impacts to them are expected. In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the study area (USFWS 2023b).

Based on the results of the literature review and database searches, 80 special-status plant species were reported in the CNDDB and CNPS databases as occurring in the 9 USGS 7.5-minute quadrangles containing and surrounding the study area. Of these 80 species, the following 15 species were determined to have a moderate to high potential to occur based on suitable soils and vegetation communities present within the study area and historical occurrences: chaparral sand-verbena, Yucaipa onion, Jaeger's milk-vetch, Nevin's barberry, thread-leaved brodiaea, smooth tarplant, Parry's spineflower, white-bracted spineflower, slender-horned spineflower, Santa Ana River woollystar, California satintail, white rabbit-tobacco, salt spring checkerbloom, San Bernardino aster, and California screw moss. Therefore, focused surveys for these species were conducted within the Project site in April/May and September 2022, and within the off-site improvement area in May 2023.[2] No special-status plant species, including the target species, were observed during 2022 or 2023 surveys. These target species are discussed in further detail in Appendix E and their potential to occur has been updated based on the results of 2022 and 2023 special-status plant focused surveys. There were no additional special-status plant species that were determined to have a moderate or high potential to occur within the Project site or off-site improvement area, based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations based on the CNDDB and CNPS Inventory (Appendix E).

[2] The County Line Road portion of the off-site study area does not contain suitable habitat for special-status plants, and therefore rare plant surveys were not conducted. The remainder of the off-site study area did not contain suitable habitat for San Bernardino aster but contained potentially suitable habitat for other target species, and therefore only a May survey pass was conducted.

5.3.2 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and those designated as fully protected or species of special concern by CDFW and as sensitive by USFWS. Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the study area. Each special-status wildlife species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences and vegetation community/habitat association. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status wildlife species that are not expected or have low potential to occur in the study area are also included in Appendix F; however, these species are not discussed further, as no significant direct or indirect impacts are expected.

Based on the results of the literature review and database searches, 46 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the study area. Of these 46 species, 15 special-status wildlife species were determined to have a moderate or high potential to occur within the study area based on habitat present and/or previous known locations in CNDDB records, and 4 special-status wildlife species—northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), yellow warbler (*Setophaga petechia)*, and red diamondback rattlesnake—were observed within the study area. The details of these 19 species are presented in Table 6. Of the 19 special-status wildlife species observed or with moderate or high potential to occur in the study area, 12 of these species are fully covered by the MSHCP and take coverage is received through payment of the MSHCP Local Development Mitigation Fee. The study area is within a burrowing owl habitat assessment area for the MSHCP. Therefore, a habitat assessment and focused surveys were conducted for this species.[3] Burrowing owl surveys were negative within the study area (i.e., no burrowing owls or burrows with confirmed burrowing owl sign were detected within study area), more information for which is provided in Section 5.3.2.2, Birds.

No other non-listed, special-status wildlife species were observed or determined to have at least a moderate potential to occur within the study area. With the exception of coastal California gnatcatcher (*Polioptila californica californica*) and Stephens' kangaroo rat, no other listed, special-status species were observed or determined to have at least a low potential to occur within the study area. Surveys were not conducted for the coastal California gnatcatcher or Stephens' kangaroo rat because these species are fully covered by the MSHCP. Stephens' kangaroo rat is additionally covered by the Stephens' Kangaroo Rat HCP. In addition, there is no USFWS-designated critical habitat for listed wildlife species overlapping the study area (USFWS 2023b).

[3] The County Line Road portion of the off-site study area does not contain suitable habitat for burrowing owl, and therefore burrowing owl surveys were not conducted within this portion of the study area.

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Amphibians					
Spea hammondii	western spadefoot	None/SSC	Covered	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Moderate potential to occur.** The study area contains suitable ephemeral water features in chaparral and valley–foothill woodlands habitat. The nearest mapped CNDDB occurrence is approximately 1 mile west of the study area, observed in 2015 (CDFW 2023d).
Birds					
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	**Low potential to nest or winter; Moderate potential to forage.** Golden eagles are an uncommon permanent resident and migrant throughout California, except in the central portion of the Central Valley. Open terrain, rugged terrain, and rolling foothills provide suitable habitat (CDFW 2023e). However, there is only one mapped CNDDB occurrence in the six 7.5-minute USGS quadrangles containing and surrounding the study area, which was an observation from 1980 (CDFW 2023d). Additionally, the species would not be expected to occur near an urban/developed area such as is present immediately to the northeast of the study area.
Circus hudsonius (nesting)	northern harrier	BCC/SSC	Covered	Nests in open wetlands (marshy meadows, wet lightly grazed pastures, old fields, freshwater and brackish marshes); and also in drier habitats (grassland and grain fields); forages in	**Observed on site. Low potential to nest.** This species was observed in the study area and has a low potential to nest due to lack of marshy wetlands in the study area. There is suitable open disturbed land, grassland, and scrub habitat present to support foraging.

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
				grassland, scrubs, rangelands, emergent wetlands, and other open habitats	
Elanus leucurus (nesting)	white-tailed kite	None/FP	Covered	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Observed on site; moderate potential to nest.** This species was observed in the study area and has a moderate potential to nest within mature oak trees in the study area. There is suitable open disturbed land, grassland, and scrub habitat present to support foraging.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Covered	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. However, the nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road, and all mapped occurrences within 10 miles are over 20 years old (CDFW 2023d). Additionally, due to the species' tendency to perch conspicuously, loggerhead shrike likely would have been observed during surveys of the study area if present during the period in which surveys were conducted.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Covered	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Observed on site; low potential to nest**. This species was observed within the off-site portion of the study area; however, the Project site contains minimal riparian and oak woodland vegetation that could support nesting for this species. The majority of the riparian habitat on the site is dominated by blue elderberry (*Sambucus mexicana*), which is not traditionally associated with this species (Lowther et al. 2020).

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Mammals					
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	**Moderate potential to occur.** The study area contains suitable coastal scrub, oak woodland, and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance-adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles east in Banning (CDFW 2023d). This occurrence is at the edge of their mapped range and is from 1995.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Covered	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are mapped CNDDB occurrences overlapping the study area and multiple occurrences within 5 miles of the study area (CDFW 2023d).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Covered	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	**Moderate potential to occur**. The species is most likely to occur in any areas with boulders/rocky areas within chaparral or coastal scrub habitat in the study area. The nearest CNDDB occurrence is approximately 4 miles north of the study area near Mentone (CDFW 2023d).
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	None	Grassland and sparse coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 4.5 miles south of the study area (CDFW 2023d).
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Covered	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
					composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (USDA 2023a). The nearest CNDDB occurrence is approximately 4.5 miles southeast of the study area, recorded in 2016 (CDFW 2023d).
Taxidea taxus	American badger	None/SSC	None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Moderate potential to occur**. The study area contains suitable dry, open, treeless areas, and grassland and coastal scrub habitat. Additionally, the study area contains burrows that have potential to support American badger. However, the six 7.5-minute USGS quadrangles containing and surrounding the study area contain one non-historic CNDDB occurrence, approximately 8.5 miles northeast, recorded in 1989 (CDFW 2023d).
Reptiles					
Anniella stebbinsi	southern California legless lizard	None/SSC	None	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	**Moderate potential to occur**. The study area contains suitable dry washes and valley-foothill, chaparral, oak woodland, and scrub habitat. Potential to occur in microhabitats with moist, loose soil within those areas. The most prominent soils series mapped in the area are described as sandy loam soils. The nearest CNDDB occurrence is a large non-specific area immediately north of the study area in Yucaipa (CDFW 2023d).
Arizona elegans occidentalis	California glossy snake	None/SSC	None	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	**Moderate potential to occur**. The study area contains suitable grassland, scrub, and chaparral habitat with some open areas. Additionally, the most prominent soil series mapped in the area are described as generally loose, sandy loam soils (USDA 2023a). The

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
					nearest CNDDB occurrence is approximately 8 miles north-northwest of the study area along Greenspot Road near the Santa Ana River (CDFW 2023d).
Aspidoscelis tigris stejnegeri	coastal tiger whiptail	None/SSC	Covered	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas	**High potential to occur.** The study area contains suitable chaparral and woodland habitat. The nearest CNDDB occurrence is mapped 1 mile west of the study area (CDFW 2023d).
Crotalus ruber	red diamondback rattlesnake	None/SSC	Covered	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	**Observed on site**. The study area contains suitable scrub, chaparral, and oak woodland habitat, and the species was observed within a burrow during a survey on April 27, 2022.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Moderate potential to occur**. The study area contains suitable scrub, chaparral, and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence since 1975 is approximately 3.5 miles south of the study area, where one adult was observed (CDFW 2023d).
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	**Moderate potential to occur**. The study area contains suitable shrubby coastal scrub and chaparral vegetation in addition to small mammal burrows. The nearest CNDDB occurrence is approximately 1 mile west of the study area near San Timoteo Road (CDFW 2023d).

Table 6. Special-Status Species with Moderate or High Potential to Occur or Observed within the Study Area

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Invertebrates					
Bombus crotchii	Crotch's bumble bee	None/SC	None	Open grassland and scrub communities supporting suitable floral resources	**Moderate potential to occur.** The study area contains open grassland and floral resources during the spring months. A *Bombus* sp. was incidentally observed during 2022 surveys, and *B. crotchii* was documented in 2020 in the region of the study area (Richardson 2023).

Notes: MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan; CNDDB = California Natural Diversity Database; study area = Project site and off-site improvement areas.

Federal Status Designations:
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

State Status Designations:
FP: Fully Protected Species
SC: State Candidate Species
SSC: California Species of Special Concern
WL: Watch List Species

The following discussion details the 19 special-status species listed in Table 6 (i.e., all species that were observed or with moderate or high potential to occur within the study area), in addition to burrowing owl, which is included to document the negative protocol-survey results.

5.3.2.1 Amphibians

Western Spadefoot

The western spadefoot (*Spea hammondii*) is a California Species of Special Concern. This species is endemic to California and northern Baja California (Jennings and Hayes 1994; Stebbins 2003). Although the species primarily occurs in lowlands, it also occurs in foothill and mountain habitats, occurring at elevations ranging from sea level to 4,000 feet amsl, but primarily occurs at elevations below 3,000 feet amsl (Stebbins 2003).

The western spadefoot requires two separate habitat components to complete their life cycle; they require upland areas for foraging and overwintering and adjacent wetland areas for breeding and reproduction (USFWS 2012). Spadefoot toads aestivate in upland habitats near potential breeding sites in burrows approximately 1 meter in depth (Stebbins 1972), and adults emerge from underground burrows during relatively warm rainfall events to breed. The species is almost completely nocturnal (Holland and Goodman 1998), with most aboveground activity occurring on rainy nights (Zeiner et al. 1988). Western spadefoot tadpoles consume planktonic organisms and algae but are also carnivorous and will forage on dead vertebrates and invertebrates (Bragg 1964).

Western spadefoot has a moderate potential to occur within the study area due to the presence of suitable habitat in the form of ephemeral water features in chaparral and valley-foothill woodland habitat.

5.3.2.2 Birds

Golden Eagle

Golden eagles (*Aquila chrysaetos*) are listed as Fully Protected in California. Golden eagles are an uncommon permanent resident and migrant throughout California, except in the central portion of the Central Valley. Open terrain, rugged terrain, and rolling foothills provide suitable habitat (CDFW 2023e). Golden eagles typically forage in open habitats including grasslands and shrublands. They feed mainly on leporids (hares and rabbits) and sciurids (ground squirrels, prairie dogs, marmots), but they also take birds, fish, and reptiles, and they frequently feed on carrion (Kochert et al. 2002).

Golden eagle has a low potential to nest within the study area but may use the site for foraging.

Burrowing Owl

Burrowing owl is a USFWS bird of conservation concern and a candidate for listing under CESA. With a relatively wide-ranging distribution throughout the West, burrowing owls are habitat generalists (Lantz et al. 2004). In California, burrowing owls are yearlong residents of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat as they are required for nesting, roosting, cover, and caching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels. Burrowing

owls may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse); useable burrows are available; and foraging habitat occurs in close proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

No burrowing owl individuals, sign, or occupied burrows were observed during 2022 or 2023 focused protocol surveys. The study area contains suitable open habitats for foraging and suitably sized small mammal burrow complexes. However, the nearest CNDDB occurrence record is approximately 8 miles from the study area (CDFW 2023d).

Northern Harrier

Northern harrier is a Species of Special Concern. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 1996). The species also forages over coastal sage scrub and other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 1996).

This species was observed in the study area (Figure 6G) but has a low potential to nest due to lack of marshy wetlands in the study area. There is suitable open disturbed land, grassland, and scrub habitat present to support foraging.

White-Tailed Kite

The white-tailed kite is a California fully protected species. This nonmigratory resident species is found throughout much of California. White-tailed kites are frequently associated with agricultural areas, low-elevation grasslands, open woodlands, marshes, and savannah habitats, where they hover high above the ground while hunting for prey. Small mammals comprise most of the white-tailed kite's diet; however, the species is also known to eat other birds, lizards, and even insects. White-tailed kites typically nest in riparian areas that are adjacent to open space areas. Nests are typically found within the upper third of trees ranging in height from 10 to 160 feet tall. Kite pairs stay together during a single breeding season and may or may not pair up again in future breeding seasons (Cornell Lab of Ornithology 2019).

White-tailed kite population numbers appear to primarily be impacted by fluctuations in the population sizes of the species' prey base; however, conversion of natural and agricultural lands to urban or commercial property, increased competition for nest sites with other raptors and corvids, drought conditions throughout Southern California, and increased disturbances near nest sites could also be impacting population sizes of white-tailed kites (Dunk 1995).

White-tailed kite was observed within the study area during the 2022 survey efforts (Figure 6F). The study area contains suitable foraging habitat for white-tailed kites in the form of open grasslands, scrub, and disturbed areas, as well as some moderately suitable nesting habitat in the form of mature oak trees.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a USFWS Bird of Conservation Concern and a California Species of Special Concern. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, although shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitat for loggerhead shrike is open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or human-made structures (such as the top of chain-link fences or barbed wire) that provide a location upon which to impale prey for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along woodland edges, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Loggerhead shrike has moderate potential to occur within the study area. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. However, the nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road, and all mapped occurrences within 10 miles are over 20 years old (CDFW 2023d). Additionally, due to the species' tendency to perch conspicuously, loggerhead shrike likely would have been observed during surveys of the study area if present during the period in which surveys were conducted.

Yellow Warbler

Yellow warbler is a USFWS Bird of Conservation Concern and a California Species of Special Concern. Yellow warblers usually nest in wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats (Lowther et al. 1999). During migration, yellow warblers occur in lowland and foothill woodland habitats such as desert oases, riparian woodlands, oak woodlands, mixed deciduous–coniferous woodlands, shrublands, forests, suburban and urban gardens and parks, groves of exotic trees, farmyard windbreaks, and orchards (Small 1994).

This species was observed within the off-site portion of the study area (Figure 6C). However, the Project site contains minimal riparian and oak woodland vegetation that could support nesting for this species. The majority of the riparian habitat on the site is dominated by blue elderberry, which is not traditionally associated with this species (Lowther et al. 2020).

5.3.2.3 Mammals

Dulzura Pocket Mouse

Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a California Species of Special Concern. This species occupies a rather wide variety of habitats including coastal sage scrub, chamise chaparral, oak woodlands, and open habitats. It occurs in greatest abundance where grassland and chaparral habitats occur near one other, such as is found within the study area. This species is solitary and nocturnal, spending daylight hours within their burrows, which they plug with earth to keep the temperatures low and humidity levels high (Johnson 2001).

Dulzura pocket mice typically produce a single litter of four young, on average, between April and July. The species' diet focuses primarily on seeds from annual grasses and forbs; however, insects and leafy vegetation are known to be consumed seasonally (Johnson 2001).

Dulzura pocket mouse has a moderate potential to occur within the study area due to the presence of sage scrub, oak woodland, and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance-adapted species.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a California Species of Special Concern. This species' occurrences are restricted to the central and northern Baja California Peninsula and southwestern California between sea level and 6,000 feet amsl (Brylski n.d.; Rios and Álvarez-Castañeda 2010). Northwestern San Diego pocket mice prefer sandy herbaceous areas within coastal sage scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland (Patton and Álvarez-Castañeda 1999).

This nocturnal species forages on seeds or forbs, grasses, and shrubs, but prefers grass seeds, which it stores within cheek pouches to transport back to the burrow. Northwestern San Diego pocket mice have also been known to feed on insects (Brylski n.d.).

Northwestern San Diego pocket mouse has a high potential to occur within the study area due to the presence of suitable sage scrub, chaparral, and annual grassland habitat.

San Diego Desert Woodrat

The San Diego desert woodrat (*Neotoma lepida intermedia*) is a California Species of Special Concern. This species is widespread throughout central and Southern California and the Great Basin, Mojave, and Colorado deserts (Hall 1981). Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown et al. 1972; Cameron and Rainey 1972; Thompson 1982). Desert woodrats use various materials such as twigs and other debris (sticks, rocks, dung), to build elaborate dens or "middens," which are used for nesting and food storage. Middens may be used by several generations of woodrats (Cameron and Rainey 1972).

Desert woodrats are primarily herbivorous, and their diet may include leaves, seeds, berries, parts of flowers, and yucca shoots (Cameron and Rainey 1972). Home ranges of desert woodrats are relatively small, and den sites are typically located along the periphery of the home range (Bleich and Schwartz 1975). The breeding season of desert woodrats probably is related to local climate conditions and available resources to support reproduction that may vary from year to year. The peak breeding season in north-coastal San Diego County, for example, appears to be from November to April, but breeding can occur year-round (Bleich 1973).

San Diego desert woodrat has a moderate potential to occur within the study area, as the study area contains suitable chaparral and sage scrub habitat to support the species.

Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) is a California Species of Special Concern. This species occurs throughout desert habitats in the southwestern United States, including Southern California, where it inhabits temperate shrubland and desert habitats with friable soils for digging (Encyclopedia Britannica 2021). Their diet primarily consists of arthropods (e.g., crustaceans, insects, centipedes, millipedes, and arachnids), but may also include other insects and small rodents (Baily and Sperry 1929; Horner et al. 1964; McCarty 1975). The southern grasshopper mouse is primarily nocturnal and appears to be active on the surface all year round (Baily and Sperry 1929; Frank and Heske 1992; McCarty 1975).

The timing of breeding probably varies geographically and in relation to environmental conditions, but the peak breeding season is May through July (McCarty 1975). Year-to-year survival appears to be low for the southern grasshopper mouse and juvenile mortality and/or dispersal appears to be very high. Because of its high population turnover, relatively early age of sexual maturity, and senescence after the first year, the southern grasshopper mouse probably is subject to "boom and bust" population cycles and is perhaps at high risk of local extirpation under poor conditions.

The southern grasshopper mouse has a moderate potential to occur within the study area due the presence of suitable grassland and sage scrub habitats. However, the substrate is not as sandy as typically preferred by this species.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a California Species of Special Concern. This species' historical range has been estimated to be from Burbank and San Fernando in Los Angeles County east to the City of San Bernardino in San Bernardino County (Hall 1981). Los Angeles pocket mouse prefers lower-elevation grasslands, alluvial sage scrub, and coastal sage scrub habitats (cited in Brylski et al. 1993). Los Angeles pocket mouse prefers fine, sandy soils, which likely are preferred for burrowing (Jameson and Peeters 1988).

Similar to other pocket mice, the Los Angeles pocket mouse hibernates in the winter, generally from October to February, periodically emerging from hibernation to feed on seed caches stored in their burrows. Emergence from hibernation is correlated with availability of forb and grass seeds. The Los Angeles pocket mouse is a granivore; however, little is known of the foraging behavior of this species (RCA 2003).

Los Angeles pocket mouse has a moderate potential to occur within the study area, as the study area contains suitable grassland and sage scrub habitat for this species. In addition, the study area is primarily composed of sandy soils, which are a preferred microhabitat characteristic of the species.

American Badger

American badger (*Taxidea taxus)* is a California Species of Special Concern. American badgers prefer open scrub or grassy areas and occur throughout California (Reid 2006; USGS 2020). The American badger is a very proficient digger and uses its short, stocky front legs and its long front claws to construct burrows. The entrance to these burrows is typically in the shape of a low, broad ellipse approximately 8–12 inches in diameter, with a large dirt mound in the front of the burrow entrance. American badgers feed primarily on rodents, but are known to consume invertebrates, birds, snakes, and carrion (Reid 2006).

American badger has a moderate potential to occur within the study area due to the presence of suitable dry, open, treeless areas, and grassland and scrub habitat. However, no American badger individuals (or sign) were observed during burrowing owl surveys or incidentally observed during other focused surveys conducted within the study area.

5.3.2.4 Reptiles

Southern California Legless Lizard

The southern California legless lizard (*Anniella stebbinsi*) is a California Species of Special Concern. This subspecies occurs south of the Transverse Range extending to northwestern Baja California (CDFW 2023e). Southern California legless lizards occur in sandy or loose loamy soils under sparse vegetation in a variety of habitats but prefer moist soils (CDFW 2023e).

The full species, California legless lizard, usually forages at the base of shrubs for insect larvae, small adult insects, and spiders (Stebbins 1954). Microhabitat may include surface objects such as flat boards, rocks, or leaf litter; they commonly burrow near the soil surface in loose soil (CDFW 2023e). Legless lizards can be active on cool days, and the southern subspecies is probably active year-round with brief periods of inactivity in the winter (CDFW 2023e). Individuals have demonstrated high site fidelity over the short term (Jennings and Hayes 1994). Live young are born in the fall, and litter sizes range from one to four (Stebbins 1954).

Southern California legless lizard has a moderate potential to occur within the study area. Suitable habitat, including dry washes and valley-foothill grasslands, chaparral, oak woodland, and scrub with mapped sandy loam soils, is present.

California Glossy Snake

The California glossy snake (*Arizona elegans occidentalis*) is a California Species of Special Concern. California glossy snakes are common throughout Southern California, especially in desert regions, but they also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass (CDFW 2023e). This species is found from below sea level to around 7,218 feet amsl (Stebbins 2003).

California glossy snakes are primarily nocturnal, spending their days and the winter in mammal burrows, rock outcrops, and under surface objects such as flat rocks and vegetation. Eggs are laid a few centimeters below the soil surface. This species feeds on a variety of desert lizards (Cunningham 1959; Ferguson et al. 1982; Vitt and Ohmart 1977).

California glossy snake has a moderate potential to occur within the study area due to the presence of valley-foothill grasslands and chaparral and scrub vegetation communities with mapped sandy loam soils.

Coastal Tiger Whiptail

Coastal tiger whiptail is a California Species of Special Concern. The coastal tiger whiptail is found in Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges; north into Ventura County; and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003). Coastal tiger whiptail can be found in deserts and semi-arid areas with sparse vegetation and open areas (CDFW 2023e). It can also be found in woodland and riparian areas where the ground is firm soil, sandy, or rocky (CDFW 2023e).

Coastal tiger whiptail has a high potential to occur within the study area due to the presence of suitable chaparral and woodland habitat.

Red Diamondback Rattlesnake

Red diamondback rattlesnake is a California Species of Special Concern. This species is distributed from San Diego County to the eastern slopes of the mountains and north through western Riverside County into southernmost San Bernardino County (CDFW 2023e). Red diamondback rattlesnake can be found in chaparral, woodland, grassland, and desert areas, particularly in rocky areas and dense vegetation. This species needs rodent burrows, cracks in rocks, or surface cover objects (CDFW 2023e).

Red diamondback rattlesnake is active during the day early in the year but increasingly shifts activity to later in the evening as daytime temperatures increase; eventually it is fully nocturnal (Stebbins 1954; Klauber 1972). This

species feeds on rodents, rabbits, lizards, birds, and other snakes (Stebbins 1954; Klauber 1972). Young are live born (Stebbins 1954; Klauber 1972). Clutch sizes average 8 young and range from 5 to 13 (Stebbins 1954; Klauber 1972).

Red diamondback rattlesnake was observed within a burrow during a survey in 2022 (Figures 6F and 6J). The study area contains suitable habitat including sage shrub, chaparral, and oak woodland.

Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is a California Species of Special Concern. This species has a large range that covers much of central and Southern California, extending from Shasta County in the north, south to San Diego County. Blainville's horned lizards occur in valley-foothill hardwood forests, conifer and riparian habitats, juniper-cypress, and juniper and annual grassland habitats (CDFW 2023e).

This species is diurnal and feeds primarily on ants and small beetles when abundant (Pianka and Parker 1975; Stebbins 1954). The reproductive season for the Blainville's horned lizard extends from May to June in Southern California (Pianka and Parker 1975). Females may lay clutch sizes ranging from 6 to 16 eggs (Tollestrup 1981). These lizards are preyed upon by leopard lizards (*Gambelia* spp.), sidewinders (*Crotalus cerastes*), striped whipsnakes (*Masticophis taeniatus*), and other snakes; loggerhead shrikes; and hawks (CDFW 2023e).

Blainville's horned lizard has a moderate potential to occur within the study area due to the presence of scrub, chaparral, and valley-foothill grasslands containing appropriate sandy loam soils.

Coast Patch-Nosed Snake

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a California Species of Special Concern. This species occurs in Southern California and ranges from the Santa Ynez Mountains near Santa Barbara to the foothills of the Santa Ana Mountains, and from within 50 miles of the coast south to the Mexican border (CDFW 2023e). Coast patch-nosed snakes occur in brushy or shrubby vegetation and require small mammal burrows for refuge and overwintering sites (CDFW 2023e; Zeiner et al. 1988).

The coast patch-nosed snake is diurnal and can be found throughout the day during the milder months of spring (Stebbins 2003). This subspecies is an opportunistic feeder and a broad generalist in its diet, which includes small mammals (*Dipodomys* spp.), lizards (*Aspidoscelis* spp., *Coleonyx* spp.), and the eggs of lizards and snakes (Stebbins 2003). Clutches range from four to seven eggs (Wright and Wright 1957). Goldberg (1995) found evidence suggesting that not all females breed each year.

Coast patch-nosed snake has a moderate potential to occur within the study area, as it contains suitable sage scrub, chaparral, and annual grassland habitat containing suitable sandy loams soils and small mammal burrows.

5.3.2.5 Invertebrates

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate for listing as endangered. This species ranges throughout much of central and Southern California, along the central and Southern California coasts, through the Central Valley, and in the surrounding foothills. However, it now appears to be absent from much of its former range, and its population appears to have declined drastically, especially in its former stronghold in the Central Valley (Xerces Society et. al. 2018; CDFW 2019a).

Crotch's bumble bee occurs in open grassland and scrub communities supporting suitable floral resources. Data from a variety of resources states that Crotch's bumble bee is most commonly associated with the species from the following families, in descending order based on number of observations: Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Richardson 2014 as cited in Xerces Society et. al. 2018). Williams et. al. (2014) cited the genera *Asclepias*, *Chaenactis, Lupinus, Medicago, Phacelia*, and *Salvia* as example food plants. The species nests primarily underground and may be reliant on small mammal burrows. Little is known about winter hibernacula, but the species is presumed to rely on microhabitats for overwintering similar to those of other bumble bees, including loose disturbed soil, leaf litter, and other debris (Xerces Society et. al. 2018; CDFW 2019a).

Crotch's bumble bee has a moderate potential to occur within the study area, as it contains open grassland and scrub communities with preferred floral resources including the genera *Phacelia, Clarkia, Eriogonum*, and *Eschscholzia* species. Crotch's bumble bee is a generalist forager and could forage anywhere within the study area where suitable floral resources are present. Although the study area supports suitable floral resources, the actual area occupied by specific resources with potential to support nesting for the species is likely a much smaller portion of the entire study area. Nesting is primarily located underground in abandoned holes made by ground squirrels, mice, and rats, but may be aboveground in abandoned bird nests or empty cavities (Osborne et al. 2008, Williams et al. 2014).

5.3.3 Potential Jurisdictional Aquatic Resources

Based on the jurisdictional delineation and review of relevant information provided in Appendix G, Aquatic Resources Delineation Report, 4.94 acres of non-wetland waters and 0.04 acres of culverts potentially regulated by RWQCB were delineated within the study area. Approximately 18.40 acres of CDFW streambed (below and above OHWM to top of bank), culverts, and associated riparian habitat occur in the study area.

On August 29, 2023, EPA and USACE announced the final rule amending the 2023 definition of "waters of the United States," conforming with the *Sackett v. EPA* decision. Some of the key changes include removing the significant nexus test from consideration when identifying tributaries and other waters as federally protected and revising the adjacency test when identifying federally jurisdictional wetlands. Under EPA's new "waters of the United States" definition, a water of the United States is a relatively permanent, standing, or continuously flowing body of water that has an apparent surface connection to a traditional navigable water. No features within the study area contain a continuous surface connection to a traditional navigable water. To date, USACE has determined that ephemeral waters are not jurisdictional. Therefore, the study area does not contain waters of the United States.

The ultimate decisions on the amount and location of jurisdictional resources are made by the resource agencies (i.e., USACE, CDFW, and RWQCB) through the regulatory permitting process. Table 7 summarizes the features under each agency's jurisdiction and the Figure 7 series, Jurisdictional Aquatic Resources, shows each feature within the study area.

Table 7. Aquatic Resource Summary for the Study Area

Feature Type	Feature Name	RWQCB (Acreage)	CDFW (Acreage)
Non-wetland waters	NWW-1 through NWW-10	4.94	—
Streambed	NWW-1 through NWW-10	—	18.30
Culvert	NWW-5B-CUL, NWW-8A-CUL, NWW-10-CUL	0.04	0.04

Table 7. Aquatic Resource Summary for the Study Area

Feature Type	Feature Name	RWQCB (Acreage)	CDFW (Acreage)
Riparian	RIP	—	0.05
	Total	4.98	18.40

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.
Totals may not sum precisely due to rounding. The RWQCB and CDFW acreage columns should not be summed together due to overlap between aquatic resources.

5.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

Wildlife corridors and linkages can be classified as either regional or local. Regional corridors and linkages are those that link two or more large areas of natural open space, while local corridors and linkages allow resident wildlife to access necessary resources (e.g., food, shelter, water) in smaller areas that might be isolated due to urban development (i.e., roads, housing tracts, etc.) or some other form of fragmentation.

Regional Wildlife Movement

The study area is in the very northern portion of central Riverside County, in the City of Calimesa. The Badlands, a small mountain range located between the cities of Beaumont and Moreno Valley, are located south and southeast of the study area. The San Jacinto Mountains lie southeast of the study area, and the San Bernardino Mountains and San Gorgonio Wilderness Area lie north of the study area, across I-10 (Figure 8A, Wildlife Corridors and Linkages).

San Timoteo Canyon Park and Norton Younglove Reserve are located south of the study area, and both areas provide regional wildlife movement opportunities between the San Bernardino Mountains and San Jacinto Mountains. More specifically, these areas provide connectivity to The Badlands to the south and to lands that have been identified by the South Coast Missing Linkages Project as part of the San Bernardino-San Jacinto Linkage (Beier et al. 2008).

Western Riverside MSHCP

The study area is located within the Western Riverside MSHCP along the northern boundary of the plan area, in the Pass Area Plan, within Subunit (SU) 2 – Badlands/San Bernardino National Forest. In addition, the western boundary of the study area is adjacent to Subunit 3 – San Timoteo Creek.

SU2 – Badlands/San Bernardino National Forest

The eastern portion of the study area is located within SU2 – Badlands/San Bernardino National Forest, and occurs within Criteria Cells 311, 323, 326, 396, 411, 412, and 417. A portion of each of these Criteria Cells are described as contributing to an MSHCP-proposed wildlife linkage, specifically Proposed Constrained Linkage 23. This proposed linkage is described as follows:

> Proposed Constrained Linkage 23 is an upland Linkage located in the vicinity of Cherry Valley, which provides a connection to Bogart County Park and San Timoteo Creek for certain species. This Linkage is constrained by surrounding existing urban and rural residential Development in the City of Calimesa. Planning Species for which Habitat is provided within this Linkage include Bell's sage sparrow, Los Angeles pocket mouse, and San Bernardino mountain kingsnake. Maintenance of a contiguous connection is important for these species. This Linkage likely provides for movement of common mammals such as bobcat (RCA 2003).

SU3 – San Timoteo Creek

The western portion of the study area occurs within SU3 – San Timoteo Creek and occurs within Criteria Cell Group E (specifically Criteria Cells 225 and 302). Cell Group E is described as contributing to an MSHCP proposed wildlife linkage, specifically Proposed Linkage 6. This proposed linkage is described as follows:

> Proposed Linkage 6 is an upland Linkage connecting San Timoteo Creek and Core Areas in the Badlands to San Bernardino County. It provides Habitat for raptors and movement for species, such as bobcat, connecting to San Bernardino County and San Timoteo Creek. Maintenance of large intact contiguous habitat blocks is important for these species (RCA 2003).

Analysis of Regional Wildlife Movement Landscape Features

San Jacinto Mountains

The San Jacinto Mountains and associated Badlands are identified as a natural landscape block. San Jacinto Mountain is the tallest and northernmost peak of the Peninsular Ranges. This area contains coastal and desert habitats side by side, creating an ecotone and providing a high diversity of habitats and species within a relatively small area of land. Many species, ranging from large mammals, such as mountain lion and mule deer, to smaller reptiles and insects, such as Blainville's horned lizard and the endangered Quino checkerspot butterfly (*Euphydryas editha quino*), rely on the diversity of habitats that exist within the natural landscape block. The study area does not overlap this landscape block (Spencer et al. 2017).

South Coast Missing Linkages Project

The South Coast Missing Linkages Project mapped several areas of land designated as the San Bernardino San Jacinto Linkage (Beier et al. 2008). This linkage comprises five swaths of land that occur partially in San Bernardino County and continue south into Riverside County that would provide a connection between the San Bernardino and San Jacinto Mountains. The westernmost linkage area identified in this Project is located immediately south of the City. The southeastern portion of the study area overlaps a portion of this mapped missing linkage area (Beier et al. 2008).

CDFW Areas of Conservation Emphasis

Additionally, the study area is mapped as an Area of Conservation Emphasis, Rank 1, 3, and 4 (CDFW 2023f; Figure 8B, Terrestrial Connectivity Areas of Conservation Emphasis).

According to CDFW (2019b), these ranks are defined, in descending order of rank, as follows:

> ACE Rank 4: Conservation Planning Linkages: These are the habitat connectivity linkages mapped in the CEHC [California Essential Habitat Connectivity] and fine-scale regional connectivity studies. Habitat connectivity linkages are often based on species-specific models and represent the best connections between core natural areas to maintain habitat connectivity. Linkages have more implementation flexibility than irreplaceable and essential corridors. Any linkage areas not included in the category above was included here.
>
> ACE Rank 3: Connections with implementation flexibility. These are other areas that have been identified as having connectivity importance, but have not been identified as channelized areas, species corridors, or habitat linkages at this time. This may change with future changes in surrounding land use or regional specific information. Hexagons included in this category include areas mapped as "intensified" in the TNC Omniscape study, core habitat areas, and hexagons on the periphery of mapped habitat linkages when not included in the categories above [i.e., Rank 4 and Rank 5].
>
> ACE Rank 1: Limited connectivity opportunity. Areas where land use may limit options for providing connectivity (e.g., agriculture, urban) or no connectivity importance has been identified in models. Includes lakes. Some DOD [Department of Defense] lands are also in this category because they have been excluded from models due to lack of conservation opportunity, although they may provide important connectivity habitat.

Wildlife Movement Analysis Within the Study Area

The study area is primarily composed of undeveloped, open land that currently provides for unconstrained local (i.e., within the study area) wildlife movement. The southeastern portion of the study area overlaps lands identified by the South Coast Missing Linkages Project that would provide a connection between the San Bernardino and San Jacinto Mountains (Beier et al. 2008). This portion of the study area includes low hillslopes supporting chaparral vegetation interspersed with low grassland valleys.

The study area is bisected by a large, direct tributary to San Timoteo Creek, and Garden Air Wash flows south of the southeastern portion of the study area. Both these drainages provide opportunities for local wildlife movement between the Badlands to the south and open lands both within the study area and immediately south of the study area. Neither of these drainages provide wildlife movement opportunities to the north, across/ under I-10.

While the study area provides opportunity for unrestricted movement from the San Jacinto Mountains and the Badlands in the south to the open lands within the study area, there are limited wildlife movement opportunities across I-10. Yucaipa Creek and Oak Glen Creek both flow northwest of the study area and provide wildlife movement opportunities under I-10; however, both of these drainages become rather constrained north of I-10 as they continue as concrete-lined channels through the City of Yucaipa. The Yucaipa Creek channel eventually connects to Wildwood Canyon State Park, which provides connectivity to the San Bernardino Mountains to the north. The Oak Glen Creek channel provides for limited wildlife movement opportunities to the Crafton Hills Conservancy, which provides connectivity to the San Bernardino Mountains via Mill Creek to the north.

Summary

In summary, the study area currently provides for local wildlife movement through the open lands and drainages (i.e., tributaries to San Timoteo Creek) within the study area. The southeastern portion of the study area overlaps with the described Western Riverside MSHCP Proposed Constrained Linkage 23 and with the westernmost linkage of the San Bernardino-San Jacinto Linkage as described by the South Coast Missing Linkages Project (Beier et al. 2008). Finally, while the study area is located adjacent to Yucaipa Creek and Oak Glen Creek and may provide wildlife movement opportunities from the San Jacinto Mountains in the south, both of these drainages become rather constrained once they pass under I-10, but both eventually do provide some connectivity north into the San Bernardino Mountains.

5.5 Western Riverside County Multiple Species Habitat Conservation Plan

Reserve Assembly Analysis

As previously stated, the Project is located within the Plan Area for the Western Riverside County MSHCP. The MSHCP Plan Area is divided into 16 Area Plans, which are further subdivided into Area Plan subunits. The Project is located along the northern boundary of the Plan Area, in the Pass Area Plan, within Subunit (SU) 2 – Badlands/San Bernardino National Forest. Portions of the Project overlap Criteria Cells 225 and 302 within Cell Group E, as well as Independent Criteria Cells 311, 323, 326, 396, 411, 412, and 417 (Figure 9, MSHCP). Criteria Cells within the study area contribute to Proposed Constrained Linkage 23. The MSHCP (RCA 2003) describes this constrained linkage as follows:

> Proposed Constrained Linkage 23 is an upland Linkage located in the vicinity of Cherry Valley, which provides a connection to Bogart County Park and San Timoteo Creek for certain species. This Linkage is constrained by surrounding existing urban and rural residential Development in the City of Calimesa. Planning Species for which Habitat is provided within this Linkage include Bell's sage sparrow, Los Angeles pocket mouse, and San Bernardino mountain kingsnake. Maintenance of a contiguous connection is important for these species. This Linkage likely provides for movement of common mammals such as bobcat.

A previous iteration of the Project underwent Joint Project Review (JPR) for which the Regional Conservation Authority (RCA) issued Findings on September 8, 2016, as JPR 07-01-08-01. However, due to Project design changes that were not originally analyzed in JPR 07-01-08-01, the Project is required to process a JPR Amendment with the RCA and Wildlife Agencies (i.e., CDFW and USFWS) for the portions of the Project not previously analyzed under JPR 07-01-08-01. The Findings for JPR 07-01-08-01 determined that the previous project was consistent with MSHCP Reserve Assembly requirements. A Reserve Assembly analysis for each Cell and Cell Group under the current Project as compared to the previous JPR Findings is summarized in Table 8 and provided below. Figure 10, Project Conservation and Avoidance, shows the proposed MSHCP Conservation and avoidance areas for the proposed Project. In summary, all of the proposed conservation under the current Project for Cell Group E and all Independent Cells meets or exceeds the conservation proposed in the previous JPR. There will be an additional 9.48 acres added to the MSHCP Reserve compared to the previous JPR. Therefore, the proposed Project is consistent with the 2016 JPR Findings.

The proposed project amended its JPR and the RCA provided Amended JPR Findings on March 10, 2025 and the Wildlife Agencies concurred with the Determination of Biologically Equivalent or Superior Preservation (DBESP) on May 29, 2025. Based on the 2025 RCA Amended Findings, the current Project has demonstrated that it will conserve equal or greater land in each Criteria Cell or Cell Group to remain consistent with the Reserve Assembly Findings in the previous JPR.

Table 8. Comparison of the MSHCP Reserve Conservation of Proposed Constrained Linkage 23 within Each Criteria Cell

Criteria Cell	Cell Group	Mesa Verde Estates Conservation (Acres)	Current Described Project Conservation[1] (Acres)	Overall Change to MSHCP Conservation (Acres)
311	Independent	0	0	None
323	Independent	0	0	None
326	Independent	1.96	3.07	+1.11
396	Independent	3.32	5.14	+1.82
411	Independent	10.83	11.61	+0.78
412	Independent	23.16	26.32	+3.15
417	Independent	15.42	18.04	+2.63
225	E	0	0	None
302	E	0	0	None
	Total	**54.69**	**64.17**	**+9.48**

Notes: MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
"+" = greater conservation under the current Project than previous JPR; "None" = same conservation under both the current Project and previous JPR.
Totals may not sum precisely due to rounding.
[1] Totals for each Criteria Cell include temporary impacts that once restored will be included in the MSHCP Conservation Area.

Cell 311

No MSHCP Conservation is proposed in Cell 311 under the current Project, which is the same as what was proposed under the previous JPR. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 311.

Cell 323

No MSHCP Conservation is proposed in Cell 323 under the current Project, which is the same as what was proposed under the previous JPR. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 323.

Cell 326

A total of 3.07 acres is proposed for MSHCP Conservation in Cell 326 under the current Project, which would provide an additional 1.11 acres of MSHCP Conservation compared to the previous JPR. This would ensure that a minimum of 1.96 acres is added to the MSHCP Reserve consistent with the 2016 JPR Findings. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 326.

Cell 396

A total of 5.14 acres is proposed for MSHCP Conservation in Cell 396 under the current Project, which would provide an additional 1.82 acres of MSHCP Conservation compared to the previous JPR. This would ensure that a minimum of 3.32 acres is added to the MSHCP Reserve consistent with the 2016 JPR Findings. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 396.

Cell 411

A total of 11.61 acres is proposed for MSHCP Conservation in Cell 411 under the current Project, which would provide an additional 0.78 acres of MSHCP Conservation compared to the previous JPR. This would ensure that a minimum of 10.83 acres is added to the MSHCP Reserve consistent with the 2016 JPR Findings. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 411.

Cell 412

A total of 26.32 acres is proposed for MSHCP Conservation in Cell 412 under the current Project, which would provide an additional 3.15 acres of MSHCP Conservation compared to the previous JPR. This would ensure that a minimum of 23.16 acres is added to the MSHCP Reserve consistent with the 2016 JPR Findings. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 412.

Cell 417

A total of 18.04 acres is proposed for MSHCP Conservation in Cell 417 under the current Project, which would provide an additional 2.63 acres of MSHCP Conservation compared to the previous JPR. This would ensure that a minimum of 15.42 acres is added to the MSHCP Reserve consistent with the 2016 JPR Findings. Therefore, the amended Project would not conflict with Reserve Assembly for Cell 417.

Cell Group E

No MSHCP Conservation is proposed in Cell Group E under the current Project, which is the same as what was proposed in the previous JPR. Therefore, the Project would not conflict with Reserve Assembly for Cell Group E.

MSHCP Section 6.1.2 Riparian/Riverine Areas and Vernal Pools

The identification of MSHCP riparian/riverine resources is based on the potential for the habitat to support, or be a tributary to habitat that supports, MSHCP riparian/riverine Covered Species. MSHCP riparian/riverine Covered Species are identified in MSHCP Section 6.1.2. The MSHCP defines riparian/riverine habitat as "lands which contain Habitat dominated by trees, shrubs, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with freshwater flow during all or a portion of the year." The MSHCP defines vernal pools as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season." Artificially created wetlands, except for those created intentionally to provide habitat or resulting from the creation of open waters or alteration of natural stream courses, are not considered MSHCP vernal pools. The MSHCP defines suitable fairy shrimp habitat as "For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall be undertaken as determined appropriate by a qualified biologist."

The study area contains 18.40 acres of MSHCP riparian/riverine resources. These features range from deeply incised drainages that cross through the majority of the site and connect downstream with San Timoteo Creek to shallow tributaries supporting high disturbance. The Project has been designed to avoid MSHCP riparian/riverine resources to the greatest extent practicable. A total of 17.50 acres (95%) of MSHCP riparian/riverine resources will be included in the open space preserve and placed under long-term protection (i.e., conservation easement or deed restriction). Direct permanent impacts to MSHCP riparian/riverine resources total 0.89 acres (5%), and direct temporary impacts to MSHCP riparian/riverine resources total 0.12 acres (less than 1%), and therefore a DBESP report is required and has been prepared for the Project.

The study area contains approximately 2.2 acres of vegetation communities considered riparian habitat per the California Natural Community List (CDFW 2023c); however, this habitat is composed of small, isolated patches that are disconnected, and primarily dominated by Mexican elderberry, which is not traditionally considered an MSHCP riparian vegetation community requiring special protection. Therefore, only a portion of these areas (0.05 acres) is considered MSHCP riparian/riverine resources. Furthermore, this vegetation is lacking the species composition and habitat structure (i.e., not suitable) to support MSHCP riparian bird species, including least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzus americanus*), and protocol surveys are not required.

The study area does not contain vernal pools or vernal pool indicator plants, depressions, cracked soils, or artificial features that may pond water (i.e., no stock ponds, road ruts, and/or human-made depressions occur within the study area). A review of historical aerial imagery did not result in areas that appear to support ponding. Finally, the study area is mapped as either containing well-draining soils (i.e., sandy) not typically associated with holding water or soil types occurring on steep slopes with very high runoff that would not allow for ponding. As such, the study area is not suitable to support vernal pools or other fairy shrimp habitat.

MSHCP Section 6.1.3 Narrow Endemic Plant Species

Part of the study area is located within NEPSSA 8, which requires a habitat assessment for Yucaipa onion (syn. Marvin's onion) and many-stemmed dudleya (Figure 2). The results of the habitat assessment and focused surveys for these species is provided below:

- Yucaipa onion: The study area is located within the species' known elevation range, and suitable chaparral is present to support this species; therefore, focused surveys during the appropriate blooming period are required. Per MSHCP Table 6-1, this species blooms from April through May. Therefore, focused surveys were conducted in April 2022, May 2022, and May 2023. This species was not detected during the focused special-status plant surveys.
- Many-stemmed dudleya: While the study area is located within the species' known elevation range and there is suitable vegetation present, the study area is located north and east of the species' known geographic range (CCH 2022). The nearest mapped occurrence is approximately 25 miles west of the study area (CDFW 2023d). While this species is not expected to occur, focused botanical surveys were nevertheless conducted during the appropriate blooming period, which is May through June but sometimes as early as March per MSHCP Table 6-1. Therefore, focused surveys were conducted within the study area in April 2022, May 2022, and May 2023. This species was not detected during the focused special-status plant surveys.

MSHCP Section 6.1.4 Urban/Wildland Interface Guidelines

Proposed developments adjacent to MSHCP Conservation Areas may create edge effects that can impact conserved biological resources. The MSHCP provides several guidelines that address potential indirect effects from proposed developments that are in proximity to MSHCP Conservation Areas. These guidelines include measures addressing the quantity and quality of runoff generated by the development (i.e., drainage and toxics), night lighting, noise, non-native invasive plant species, barriers to humans and animal predators, and grading/land development encroachment. The Project proposes conservation that will contribute to the MSHCP Conservation Areas. In addition, the Project is adjacent to existing conserved lands. The Project is committed to following the MSHCP Section 6.1.4 Urban/Wildland Interface Guidelines. The proposed Project does not conflict with MSHCP Section 6.1.4.

MSHCP Section 6.3.2 Additional Surveys

The study area is not located within an Additional Survey Needs and Procedures area for amphibians or small mammals. The Project site is located within a CASSA for plant species and in an Additional Survey Needs and Procedures area for burrowing owl.

MSHCP Criteria Area Species Survey Area

Part of the study area is located within CASSA 6, which requires a habitat assessment for Nevin's barberry, smooth tarplant, and round-leaved filaree (Figure 2). The results of the habitat assessments and focused surveys for these species are provided below:

- Nevin's barberry: While the study area contains suitable micro-habitat requirements for the species including steep, north-facing slopes or sandy washes, nearest occurrences are not recent and are at lower elevations. While this species is not expected to occur, focused botanical surveys were nevertheless conducted during the appropriate blooming period. This species was not detected during the April 2022, May 2022, or May 2023 focused special-status plant surveys.
- Smooth tarplant: The study area is located within the species' known elevation range, and suitable valley and foothill grassland is present to support this species. Focused surveys were conducted during the appropriate blooming period. This species was not detected during the April 2022, May 2022, or May 2023 focused special-status plant surveys.
- Round-leaved filaree: While the study area is located within the species' known elevation range and there is suitable vegetation present, the study area does not contain clay soils. While this species is not expected to occur, focused botanical surveys were nevertheless conducted during the appropriate blooming period. This species was not detected during the April 2022, May 2022, or May 2023 focused special-status plant surveys.

Burrowing Owl

A Step I habitat assessment and Step II-A focused burrow survey for burrowing owl was conducted concurrently in April and May 2022 for the Project site, and in April 2023 for the off-site improvement area. The 500-foot buffer was not legally accessible and therefore was visually surveyed from the study area boundary. Suitable habitat for burrowing owl was detected throughout the study area and is characterized as herbaceous vegetation and disturbed habitat with openings that could support burrows. The study area contains sandy loam soils that could support burrow formation.

A total of 147 burrow features were mapped during the focused burrow survey (Figure 6, Biological Resources). Burrows ranged from erosional features, artificial features that function as burrow surrogates, and fossorial mammal burrows, all with openings 4 inches or greater in diameter. Burrows were scattered fairly evenly across the study area. California ground squirrels were present within the study area.

Step II-B focused burrowing owl surveys were conducted from April to July 2022 for the Project site, and from April to June 2023 for the off-site improvement area (refer to Table 3 in Section 3.2 of this report for burrowing owl survey dates and conditions). Burrowing owl surveys were negative within the study area (i.e., no burrowing owls or burrows with confirmed burrowing owl sign were detected within study area). Although burrowing owl were not detected during the survey, due to the presence of potentially suitable habitat, a pre-construction survey is required within 30 days prior to ground disturbance pursuant to the MSHCP to confirm conditions have not changed prior to construction.

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6 Project Impacts

This section addresses direct and indirect impacts to biological resources that would result from implementation of the Project, provides the significance determinations for proposed or potential impacts, and proposes mitigation. The evaluation of Project impacts is organized by the resource potentially affected: riparian and sensitive vegetation communities (special-status vegetation communities), special-status species, jurisdictional waters and wetlands, and wildlife movement. Cumulative impacts are addressed in the Project's environmental impact report.

6.1 Explanation of Findings of Significance

Impacts to special-status vegetation communities, plant and wildlife species, and jurisdictional waters, including wetlands, must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible, because the significance of an activity may vary with the setting. Appendix G of the CEQA Guidelines, however, does provide "examples of consequences which may be deemed to be a significant effect on the environment" (14 CCR 15064[e]). These effects include substantial effects on rare or endangered species of animal or plant or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have a significant effect on the environment. Under that section, a proposed project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of a major period of California history or prehistory.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G Environmental Checklist, which states that a project would potentially have a significant effect if it does any of the following:

- Impact BIO-1. Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Impact BIO-2. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Impact BIO-3. Has a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Impact BIO-4. Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
- Impact BIO-5. Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Impact BIO-6. Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The evaluation of whether an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to or result in permanent loss of an important resource, such as a population of a rare plant or wildlife species. Impacts may be important locally, because they result in an adverse alteration of existing site conditions, but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether that impact can be mitigated to a level below significance.

6.2 Definition of Impacts

Direct permanent impacts refer to complete loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct permanent impacts were quantified by overlaying the proposed impact limits on the biological resources map of the study area. Direct permanent impacts would occur from construction of buildings, associated infrastructure, landscaping, fuel modification, long-term maintenance areas, and manufactured slopes.

Direct temporary impacts refer to temporary loss of a biological resource. For the purposes of this report, it refers to the area where vegetation will be cleared but then restored to pre-existing conditions. Direct temporary impacts consist of an approximately 15-foot construction buffer, which surrounds the on-site permanent impacts, and temporary work areas associated with off-site improvement areas.

Indirect impacts are reasonably foreseeable effects caused by a project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this report, indirect impacts may affect areas outside the disturbance zone. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.

Conservation or conserved in this document refers to land that is intended for MSHCP Conservation and will be protected in perpetuity (e.g., through a conservation easement or through transfer to the RCA in fee title).

Avoidance in this document refers to areas within the study area that will be fully avoided and left in their natural state.

6.3 Impacts Analysis

A total of 1,164.0 acres, including 1,154.2 acres within the Project site and 9.7 acres within the off-site areas, would be permanently impacted with Project implementation (Figure 11, Impacts to Biological Resources). A total of 25.5 acres, including 22.5 acres within the Project site and 3.0 acres within the off-site areas would be temporarily impacted with Project implementation (Figure 11). Table 9A summarizes permanent direct impacts to vegetation communities and land covers within the study area, Table 9B summarizes the temporary direct impacts to vegetation communities and land covers within the study area, and Table 9C summarizes the off-site impacts within the four off-site improvement areas.

Table 9A. Permanent Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Permanent Impact Acreage		
				Off-Site	On-Site	Total
Grass and Herb Dominated						
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	1.2	548.7	549.9
Needle grass–melic grass grassland[2]	*Nassella* spp., *Melica* spp.	*Nassella pulchra–Avena* spp.– *Bromus* spp.	S3	0	0.5	0.5
Russian thistle–dyer's woad – fivehood bassia fields	*Salsola tragus–Isatis tinctoria–Bassia* spp. [pending]	*Salsola* spp.	SNA	0	0.6	0.6
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum* (*elongatum, nudum*)	*Corethrogyne filaginifolia*	S4	0	28.8	28.8
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*)	*Hirschfeldia incana*	SNA	0.5	10.8	11.3
		Grass and Herb Dominated Subtotal		*1.7*	*589.4*	*591.0*
Chaparral						
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	0.1	373.9	374.0
		Adenostoma fasciculatum–(Ceanothus tomentosus)	S5	0	21.6	21.6
		Adenostoma fasciculatum–(Lotus scoparius–Eriodictyon spp.*)*	S5	0	3.0	3.0
		Adenostoma fasciculatum–Eriogonum fasciculatum	S4	0	6.0	6.0
Chamise–sage chaparral	*Adenostoma fasciculatum–Salvia* spp.	*Adenostoma fasciculatum–Salvia mellifera*	S4	0	3.9	3.9
		Adenostoma fasciculatum–Salvia mellifera–Ceanothus crassifolius	S4	0	3.1	3.1
		Adenostoma fasciculatum – Salvia mellifera–Rhus ovata[2]	S3	0	0.4	0.4

Table 9A. Permanent Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Permanent Impact Acreage		
				Off-Site	On-Site	Total
Eastwood manzanita chaparral[2]	*Arctostaphylos glandulosa*	*Arctostaphylos glandulosa–Adenostoma fasciculatum–Quercus wislizeni*	S3	0	1.6	1.6
Hairy leaf–woolly leaf ceanothus chaparral[2]	*Ceanothus (oliganthus, tomentosus)*	*Ceanothus tomentosus*	S3	0	0.1	0.1
Hoary leaf ceanothus chaparral	*Ceanothus crassifolius*	*Ceanothus crassifolius–Adenostoma fasciculatum–Salvia mellifera*	S4	0	0.6	0.6
Scrub oak chaparral	*Quercus berberidifolia*	*Quercus berberidifolia–Adenostoma fasciculatum*	S4	0	6.8	6.8
Sugarbush chaparral[2]	*Rhus ovata*	*Rhus ovata*	S3	0	5.2	5.2
			Chaparral Subtotal	*0.1*	*426.0*	*426.2*
Riparian						
Arroyo willow thickets[2]	*Salix lasiolepis*	*Salix lasiolepis*	S3	0	0.1	0.1
Basket bush–river hawthorn–desert olive patches[2]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens*	*Sambucus nigra*	S3	0	<0.1	<0.1
			Riparian Subtotal	*0*	*0.1*	*0.1*
Scrub						
Black sage scrub	*Salvia mellifera*	*Salvia mellifera*	S4	0	2.1	2.1
		Salvia mellifera–Eriogonum fasciculatum / Bromus rubens	S4	<0.1	0.5	0.5
Brittle bush scrub	*Encelia farinosa*	*Encelia farinosa*	S4	0	10.7	10.7
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp.	*Malacothamnus fasciculatus*	S4	0	25.7	25.7
Bush penstemon scrub[2]	*Keckiella antirrhinoides*	*Keckiella antirrhinoides*	S3	0	2.4	2.4

Table 9A. Permanent Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Permanent Impact Acreage		
				Off-Site	On-Site	Total
California buckwheat scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	S5	0	12.1	12.1
		Eriogonum fasciculatum–Encelia farinosa	S5	0	0.1	0.1
California sagebrush–(purple sage) scrub	*Artemisia californica – (Salvia leucophylla)*	*Artemisia californica–Lotus scoparius*	S5	0	1.0	1.0
Deer weed – silver lupine – yerba santa scrub	*Lotus scoparius–Lupinus albifrons–Eriodictyon* spp.	*Lotus scoparius*	S5	0	7.7	7.7
			Scrub Subtotal	*<0.1*	*62.3*	*62.3*
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	0.5	15.1	15.6
			Woodland Subtotal	*0.5*	*15.1*	*15.6*
Unvegetated Wash and River Bottom						
Unvegetated wash and river bottom	NA		SNA	<0.1	0.8	0.8
			Unvegetated Subtotal	*<0.1*	*0.8*	*0.8*
Disturbed and Developed						
Urban/Developed	NA		SNA	7.0	7.5	14.5
Disturbed Habitat	NA		SNA	0.4	34.2	34.6
Ornamental Plantings	NA		SNA	0	18.7	18.7
			Disturbed and Developed Subtotal	*7.4*	*60.5*	*67.9*
			Grand Total	**9.7**	**1,154.2**	**1,164.0**

Notes: Totals may not sum due to rounding.

[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers and abbreviations have the following meanings (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure

5 = demonstrably widespread, abundant, and secure
NA = not applicable
SNA = state ranking not assigned

[2] Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023c).

Table 9B. Temporary Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Temporary Impact Acreage		
				Off-Site	On-Site	Total
Grass and Herb Dominated						
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	0.7	8.0	8.6
Needle grass–melic grass grassland[2]	*Nassella* spp., *Melica* spp.	*Nassella pulchra–Avena* spp.– *Bromus* spp.	S3	0	<0.1	<0.1
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum* (*elongatum, nudum*)	*Corethrogyne filaginifolia*	S4	0	0.3	0.3
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*)	*Hirschfeldia incana*	SNA	0	0.2	0.2
		Grass and Herb Dominated Subtotal		*0.7*	*8.5*	*9.2*
Chaparral						
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	0	8.6	8.6
		Adenostoma fasciculatum–(Ceanothus tomentosus)	S5	0	0.7	0.7
		Adenostoma fasciculatum–(Lotus scoparius–Eriodictyon spp.*)*	S5	0	0.2	0.2
Hairy leaf–woolly leaf ceanothus chaparral[2]	*Ceanothus (oliganthus, tomentosus)*	*Ceanothus tomentosus*	S3	0	0.2	0.2
Scrub oak chaparral	*Quercus berberidifolia*	*Quercus berberidifolia–Adenostoma fasciculatum*	S4	0	<0.1	<0.1
Sugarbush chaparral[2]	*Rhus ovata*	*Rhus ovata*	S3	0	0.3	0.3
			Chaparral Subtotal	*0*	*10.0*	*10.0*

Table 9B. Temporary Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Temporary Impact Acreage		
				Off-Site	On-Site	Total
Riparian						
Basket bush–river hawthorn–desert olive patches[2]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens*	*Sambucus nigra*	S3	0	<0.1	<0.1
			Riparian Subtotal	*0*	*<0.1*	*<0.1*
Scrub						
Black sage scrub	*Salvia mellifera*	*Salvia mellifera*	S4	0	<0.1	<0.1
		Salvia mellifera–Eriogonum fasciculatum / Bromus rubens	S4	<0.1	<0.1	<0.1
Brittle bush scrub	*Encelia farinosa*	*Encelia farinosa*	S4	0	<0.1	<0.1
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp.	*Malacothamnus fasciculatus*	S4	0	0.7	0.7
California buckwheat scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	S5	0	0.2	0.2
		Eriogonum fasciculatum–Encelia farinosa	S5	0	<0.1	<0.1
			Scrub Subtotal	*<0.1*	*0.9*	*0.9*
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	1.1	1.4	2.5
			Woodland Subtotal	*1.1*	*1.4*	*2.5*
Unvegetated Wash and River Bottom						
Unvegetated wash and river bottom	NA		SNA	0	0.1	0.1
			Unvegetated Subtotal	*0*	*0.1*	*0.1*
Disturbed and Developed						
Urban/Developed	NA		SNA	1.0	0.1	1.1

Table 9B. Temporary Direct Impacts to Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Temporary Impact Acreage		
				Off-Site	On-Site	Total
Disturbed Habitat	NA		SNA	0.2	1.1	1.3
Ornamental Plantings	NA		SNA	0	0.5	0.5
Disturbed and Developed Subtotal				*1.2*	*1.7*	*2.9*
Grand Total				**3.0**	**22.5**	**25.5**

Notes: Totals may not sum due to rounding.

1 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers and abbreviations have the following meanings (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
SNA = state ranking not assigned

2 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023c).

Table 9C. Direct Impacts to Vegetation Communities and Land Cover Types within the Off-Site Areas

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Impact Acreage	
				Permanent	Temporary
Fuel Modification Zone					
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	0.9	0
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	<0.1	0
Disturbed habitat	NA		SNA	<0.1	0
Fuel Modification Zone Subtotal				*0.9*	*0*
County Line Road[2]					
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	0.3	0
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*)	*Hirschfeldia incana*	SNA	0.1	0
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	0.5	1.1
Disturbed habitat	NA		SNA	0.4	0.2

Table 9C. Direct Impacts to Vegetation Communities and Land Cover Types within the Off-Site Areas

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Impact Acreage	
				Permanent	Temporary
Urban/Developed	NA		SNA	5.0	0.7
			County Line Road Subtotal	*6.3*	*2.0*
Avenue L					
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	0	0.7
Urban/Developed	NA		SNA	0	0.1
			Avenue L Subtotal	*0*	*0.8*
Sandalwood Drive/7th Street					
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	<0.1	0
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea (solstitialis, melitensis)*	*Hirschfeldia incana*	SNA	0.4	0
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	0.1	0
Black sage scrub	*Salvia mellifera*	*Salvia mellifera–Eriogonum fasciculatum / Bromus rubens*	S4	<0.1	<0.1
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	<0.1	0
Unvegetated wash and river bottom	NA		SNA	<0.1	0
Disturbed habitat	NA		SNA	<0.1	0
Urban/Developed	NA		SNA	2.0	0.2
			Sandalwood Drive/7th Street Subtotal	*2.5*	*0.2*
			Off-Site Improvements Total	**9.7**	**3.0**

Notes: Totals may not sum due to rounding.

[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers and abbreviations have the following meanings (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
SNA = state ranking not assigned

[2] Impacts for the County Line Road off-site improvements have not been finalized. However, to be conservative, this impact analysis covers the largest possible footprint for the County Line Road improvements.

6.3.1 Impact BIO-1: Special-Status Species

6.3.1.1 Impacts to Special-Status Plants

Fifteen special-status plant species were determined to have a moderate or high potential to occur within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions in the study area. These species were targeted during 2022 and 2023 focused surveys for special-status plants within the study area. However, focused surveys for special-status plants were negative.

The study area does not occur within federally designated critical habitat for special-status plant species, and there would be no impacts to critical habitat.

Direct Impacts

Focused surveys for special-status plants conducted in 2022 and 2023 as a part of the proposed Project were negative for special-status plants. As such, no special-status plants are expected to occur within the study area. Therefore, **no direct impacts** to special-status plant species are anticipated and no avoidance or compensatory mitigation measures are required.

Construction-Related Indirect Impacts

Potential short-term or temporary indirect impacts to special-status plant species resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the release of chemical pollutants. These potential construction-related indirect impacts to special-status plant species would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring implementation of biological monitoring and a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, implementation of standard dust control measures, development of a stormwater pollution prevention plan (SWPPP), and servicing of all vehicles and equipment in designated staging areas. With implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources), the effect of construction-related indirect impacts to special-status plant species would be minimized to **less than significant with mitigation incorporated.**

Long-Term Indirect Impacts

Potential long-term indirect impacts that could result from development near special-status plant species or their suitable habitat include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for special-status plants; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to special-status plant species would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential long-term indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status plants. Additionally, **MM- BIO-6** (Open Space Conservation and Avoidance) would reduce potential long-term indirect impacts to a less-than-significant level by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. With implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance), the effect of long-term indirect impacts to special-status plant species would be minimized to **less than significant with mitigation incorporated.**

6.3.1.2 Impacts to Special-Status Wildlife

A total of 19 special-status wildlife species were observed or determined to have a moderate or high potential to occur within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions on the study area: western spadefoot, golden eagle, northern harrier, white-tailed kite, loggerhead shrike, yellow warbler, Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, American badger, southern California legless lizard, California glossy snake, coastal tiger whiptail, red diamondback rattlesnake, Blainville's horned lizard, coast patch-nosed snake, and Crotch's bumble bee. Impacts to species covered by the MSHCP shall be mitigated through **MM-BIO-3** (Local Development Mitigation Fee) by payment of the MSHCP Local Development Mitigation Fee and are not analyzed further in this document. The following species are not covered by the MSHCP and will be discussed further: Dulzura pocket mouse, southern grasshopper mouse, American badger, southern California legless lizard, California glossy snake, coast patch-nosed snake, and Crotch's bumble bee.

Burrowing owl was targeted during 2022 and 2023 protocol surveys within the study area and the surveys were negative. The study area does not occur within federally designated critical habitat for special-status wildlife species, and there would be no impacts to critical habitat.

Direct Impacts

Birds

Burrowing Owl

No burrowing owl were detected during protocol burrowing owl surveys. However, burrowing owls are a transient species and have the potential to occupy the site prior to initiation of construction activities. Adults of these species can reside belowground and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-BIO-4** (Pre-Construction Burrowing Owl Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for burrowing owl within 30 days prior to ground disturbance pursuant to the MSHCP to confirm conditions have not changed prior to construction. Therefore, direct impacts to burrowing owl would be **less than significant with mitigation incorporated.**

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Southern Grasshopper Mouse)

No special-status, fossorial small mammals were incidentally detected within the study area during surveys. However, the study area contains suitable habitat for these species, and development of the Project would result in the permanent loss of 1,130.6 acres and temporary loss of 23.9 acres of potential habitat for Dulzura pocket mouse as well as the permanent loss of 653.4 acres and temporary loss of 10.1 acres of potential habitat for southern grasshopper mouse. The potential loss of suitable habitat from the study area has potential to affect the local population dynamics of these species, if present. Adults of these species typically reside belowground during the daytime and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-BIO-5** (Pre-Construction Fossorial Small Mammal Clearance Surveys) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods and relocation of individuals that may be captured. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of conserved or avoided open space that could support relocated small mammals, if present, and offset impacts to potentially suitable habitat. All temporary impacts to potential habitat would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands outside of the MSHCP Conservation area and **MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area, and would be included in the open space once restoration is complete. In addition, the Project includes an additional 200 acres of buffer areas that include land uses such as fuel modification and manufactured slopes. These areas are quantified as a permanent impact; however, these land uses are expected to provide habitat for these species and can facilitate species dispersal and foraging, as well as serve as a protective buffer between conserved land and more urbanized land uses. Furthermore, Project implementation of **MM-BIO-3** (Local Development Mitigation Fee) would require that the Project pay an MSHCP Local Development Mitigation Fee to the City of Calimesa that will contribute to MSHCP land acquisition and conserved land management. The MSHCP has identified large and interconnected swaths of conservation land that either have been conserved or are described for conservation to aid in the recovery of Covered Species. While Dulzura pocket mouse and southern grasshopper mouse are not covered under the MSHCP, there is overlap in suitable habitat preferences (e.g., coastal sage scrub, chaparral, open habitats, etc.) for these species and MSHCP Covered Species. Therefore, the conservation of land in western Riverside County, supported in part by the MSHCP Local Development Mitigation Fee required by **MM-BIO-3,** includes potentially suitable habitat for Dulzura pocket mouse and southern grasshopper mouse and is expected to directly benefit these species. Therefore, direct impacts to fossorial small mammals would be **less than significant with mitigation incorporated.**

American Badger

American badger has a moderate potential to occur within the study area due to the presence of suitable dry, open, treeless areas, and grassland and scrub habitat. Development of the Project would result in the direct permanent loss of 1,114.2 acres and temporary loss of 21.3 acres of potential habitat for American badger. The potential loss of suitable habitat from the study area has potential to the affect the local population dynamics of this species, if present. In addition, adults of this species typically reside belowground and therefore are susceptible to injury and mortality during construction activities. The potential impacts to dens and loss or injury to individual American badgers are considered significant absent mitigation.

Project implementation of **MM-BIO-7** (Pre-Construction American Badger Surveys and Avoidance) would reduce potential direct impacts to a less-than-significant level through pre-construction surveys for winter and natal badger dens and, if present, implementation of avoidance measures to minimize impacts to badgers. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of conserved or avoided open space that could support relocated American badgers, if present, and offset impacts to potentially suitable habitat. All temporary impacts to potential habitat would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands outside of the MSHCP Conservation area **and MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area, and would be included in the open space once restoration is complete. In addition, the Project includes an additional 200 acres of buffer areas that include land uses such as fuel modification and manufactured slopes. These areas are quantified as a permanent impact; however, these land uses are expected to provide habitat for this species and can facilitate species dispersal and serve as a protective buffer between conserved land and more urbanized land uses. Furthermore, Project implementation of **MM-BIO-3** (Local Development Mitigation Fee) would require that the Project pay an MSHCP Local Development Mitigation Fee to the City of Calimesa that will contribute to MSHCP land acquisition and conserved land management. The MSHCP has identified large and interconnected swaths of conservation land that either have been conserved or are described for conservation to aid in the recovery of Covered Species. While American badger is not covered under the MSHCP, there is overlap in suitable habitat preferences (e.g., coastal sage scrub, chaparral, open habitats, etc.) for this species and MSHCP Covered Species. Therefore, the conservation of land in western Riverside County, supported in part by the MSHCP Local Development Mitigation Fee required by **MM-BIO-3**, includes potentially suitable habitat for American badger and is expected to directly benefit this species. Therefore, direct impacts to American badger would be **less than significant with mitigation incorporated.**

Reptiles

The study area contains suitable habitat for special-status reptiles, including southern California legless lizard, California glossy snake, and coast patch-nosed snake, and development of the Project would result in the permanent loss of 1,130.7 acres and temporary loss of 23.9 acres of potential habitat for special-status reptiles. The potential loss of this habitat from the study area has potential to affect the local population dynamics of these species, if present. In addition, these species generally have low mobility to escape and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-BIO-8** (Pre-Construction Reptile Clearance Surveys) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. In addition, for any non-listed special-status wildlife species occurring in construction areas, buffers will be established or, if establishing buffers is not feasible, attempts will be made to move the individuals to safety through capture and relocation or through encouraging them to leave the site. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of conserved or avoided open space that could support relocated special-status reptiles, if present, and offset impacts to potentially suitable habitat. All temporary impacts to potential habitat would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands outside of the MSHCP Conservation area and **MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area, and would be included in the open space once restoration is complete. In addition, the Project includes an additional 200 acres of buffer areas that include land uses such as fuel modification and manufactured slopes. These areas are quantified as a permanent impact; however, these land uses are expected to provide

habitat for these species and can facilitate species dispersal and serve as a protective buffer between conserved land and more urbanized land uses. Furthermore, Project implementation of **MM-BIO-3** (Local Development Mitigation Fee) would require that the Project pay an MSHCP Local Development Mitigation Fee to the City of Calimesa that will contribute to MSHCP land acquisition and conserved land management. The MSHCP has identified large and interconnected swaths of conservation land that either have been conserved or are described for conservation to aid in the recovery of Covered Species. While southern California legless lizard, California glossy snake, and coast patch-nosed snake are not covered under the MSHCP, there is overlap in suitable habitat preferences for these species and MSHCP Covered Species. Therefore, the conservation of land in western Riverside County, supported in part by the MSHCP Local Development Mitigation Fee required by **MM-BIO-3,** includes potentially suitable habitat for southern California legless lizard, California glossy snake, and coast patch-nosed snake and is expected to directly benefit these species. Therefore, direct impacts to special-status reptiles would be **less than significant with mitigation incorporated.**

Invertebrates

Crotch's Bumble Bee

Crotch's bumble bee has a moderate potential to occur within the study area. Direct impacts to individuals of this uncommon species could occur with Project implementation. Crotch's bumble bee is a generalist forager and could forage anywhere within the study area where suitable floral resources are present. Although the entire study area supports suitable floral resources, the actual area occupied by specific resources with potential to support nesting for the species is likely a much smaller portion of the study area. Nesting is primarily located underground in abandoned holes made by ground squirrels, mice, and rats, but may be above ground in abandoned bird nests or empty cavities (Osborne et al. 2008, Williams et al. 2014). These microhabitats, such as small mammal burrows where the species may nest, and debris and other loose matter suitable for hibernation, likely occur on site in more limited areas. Because Crotch's bumble bee typically nests underground, individuals would also be highly vulnerable to injury and mortality during construction, which could crush nests and individuals, if present on site. Therefore, the Project has the potential to result in direct impacts to individuals that may be harmed or killed during vegetation removal and grading for Project buildings and/or construction of on-site roadways and other on-site and off-site infrastructure.

Project implementation of **MM-BIO-9** (Focused Surveys for Crotch's Bumble Bee) would reduce potential direct impacts to a less-than-significant level by requiring focused surveys for Crotch's bumble bee and avoidance of nesting resources, if present, until the nesting period has concluded. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of conserved or avoided open space that could support Crotch's bumble bee, if present, and offset impacts to potentially suitable nesting habitat. All temporary impacts to potential habitat would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands outside of the MSHCP Conservation area and **MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area, and would be included in the open space once restoration is complete. In addition, the Project includes an additional 200 acres of buffer areas that include land uses such as fuel modification zones and manufactured slopes. These areas are quantified as a permanent impact; however, these land uses are expected to provide habitat for this species and can facilitate species dispersal and foraging, as well as serve as a protective buffer between conserved land and more urbanized land uses. Furthermore, Project implementation of **MM-BIO-3** (Local Development Mitigation Fee) would require that the Project pay an MSHCP Local Development Mitigation Fee to the City of Calimesa that will contribute to MSHCP land acquisition and conserved land management. The MSHCP has identified large and interconnected swaths of conservation land that either have been conserved or are described for conservation to aid

in the recovery of Covered Species. While Crotch's bumble bee is not covered under the MSHCP, there is overlap in suitable habitat preferences for this species and MSHCP Covered Species. Therefore, the conservation of land in western Riverside County, supported in part by the MSHCP Local Development Mitigation Fee required by MM-BIO-3, includes potentially suitable habitat for Crotch's bumble bee and is expected to directly benefit this species. Therefore, potential direct impacts to Crotch's bumble bee would be **less than significant with mitigation incorporated.**

Nesting Birds

The study area contains opportunities for birds of prey (raptors) and other avian species to nest on site. Native nesting bird species are protected by California Fish and Game Code Sections 3503 and 3503.5 and by the federal MBTA (16 USC 703–711). In particular, Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the active nests or eggs of any bird in California; Section 3503.5 protects all raptors and their eggs and active nests; and the MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of native migratory bird species throughout the United States. Currently, California considers any nest that is under construction or modification or is supporting eggs, nestlings, or juveniles as "active." Therefore, impacts to nesting migratory birds and raptors would be considered significant absent mitigation under CEQA.

Project implementation of **MM-BIO-10** (Pre-Construction Nesting Bird Survey) would reduce potential direct impacts to a less-than-significant level through the recommendation that vegetation removal activities be conducted outside the general bird nesting season (January 1 through September 30, depending on the species), a requirement for a pre-construction nesting bird survey by a qualified biologist conducted prior to vegetation removal if vegetation cannot be removed outside the nesting bird season, and avoidance buffers and monitoring if active nests are found. Therefore, direct impacts to nesting birds would be **less than significant with mitigation incorporated.**

Indirect Impacts

Birds

Burrowing Owl

Project development has the potential to result in indirect impacts to burrowing owl.

Construction-Related: Potential short-term or temporary indirect impacts to burrowing owl resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requirement of all vehicles and equipment be serviced in designated staging areas, and mandate that construction will not be conducted at night. In addition, Project implementation of **MM-BIO-4** (Pre-Construction Burrowing Owl Survey) would result in identification and avoidance of any burrowing owls within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-4** (Pre-Construction Burrowing Owl Survey) would minimize the effect of construction-related indirect impacts to burrowing owl to **less than significant with mitigation incorporated.**

Long-Term: Potential long-term indirect impacts that could result from development near burrowing owl or their suitable habitat include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for burrowing owl; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for burrowing owl, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-BIO-6** (Open Space Conservation and Avoidance) will further buffer effects of urbanization through establishment of a minimum 303.8 acres of conserved or avoided open space and by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Long-term indirect impacts to burrowing owl to **less than significant with mitigation incorporated.**

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Southern Grasshopper Mouse)

Project development has the potential to result in indirect impacts to special-status fossorial small mammal species, including Dulzura pocket mouse and southern grasshopper mouse.

Construction-Related: Potential short-term or temporary indirect impacts to special-status fossorial small mammals resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to special-status fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requirement of all vehicles and equipment be serviced in designated staging areas, and mandate that construction will not be conducted at night. In addition, Project implementation of **MM-BIO-5** (Pre-Construction Fossorial Small Mammal Clearance Surveys) would result in identification and relocation of any fossorial small mammals within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-5** (Pre-Construction Fossorial Small Mammal Clearance Surveys) would minimize the effect of construction-related indirect impacts to special-status fossorial small mammals to **less than significant with mitigation incorporated.**

Long-Term: Potential long-term indirect impacts that could result from development near special-status fossorial small mammal species or their suitable habitat include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat

for fossorial small mammals; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status fossorial small mammals, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-BIO-6** (Open Space Conservation and Avoidance) will further buffer effects of urbanization through establishment of a minimum 303.8 acres of conserved or avoided open space and by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of long-term indirect impacts to special-status fossorial small mammals to **less than significant with mitigation incorporated.**

American Badger

Project development has the potential to result in indirect impacts to American badger.

Construction-Related: Potential short-term or temporary indirect impacts to American badger resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requirement of all vehicles and equipment be serviced in designated staging areas, and mandate that construction will not be conducted at night. In addition, Project implementation of **MM-BIO-7** (Pre-Construction American Badger Surveys and Avoidance) would result in identification and relocation of any American badger within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-7** (Pre-Construction American Badger Surveys and Avoidance) would minimize the effect of construction-related indirect impacts to American badger to **less than significant with mitigation incorporated.**

Long-Term: Potential long-term indirect impacts that could result from development near American badger or their suitable habitat include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for American badger; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for American badger, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-BIO-6** (Open Space Conservation and Avoidance) will further buffer effects of urbanization through establishment of a minimum of 303.8 acres of conserved or avoided open space and by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Implementation of **MM- BIO-2 (**Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of long-term indirect impacts to American badger **to less than significant with mitigation incorporated.**

Reptiles

Project development has the potential to result in indirect impacts to special-status reptiles, including southern California legless lizard, California glossy snake, and coast patch-nosed snake.

Construction-Related: Potential short-term or temporary indirect impacts to special-status reptiles resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to special-status reptiles would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requirement of all vehicles and equipment be serviced in designated staging areas, and mandate that construction will not be conducted at night. In addition, Project implementation of **MM-BIO- 8** (Pre-Construction Reptile Clearance Surveys) would result in identification and relocation of any special-status reptiles within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-8** (Pre-Construction Reptile Clearance Surveys) would minimize the effect of construction-related indirect impacts to special-status reptiles to **less than significant with mitigation incorporated.**

Long-Term: Potential long-term indirect impacts that could result from development near special-status reptiles or their suitable habitat include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for special-status reptiles; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to special-status reptiles would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public

access to areas with potential habitat for special-status reptiles, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-BIO-6** (Open Space Conservation and Avoidance) will further buffer effects of urbanization through establishment of a minimum of 303.8 acres of conserved or avoided open space and by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of long-term indirect impacts to special-status reptiles to **less than significant with mitigation incorporated.**

Invertebrates

Crotch's Bumble Bee

Project development has the potential to result in indirect impacts to Crotch's bumble bee.

Construction-Related: Potential short-term or temporary indirect impacts to nest resources for Crotch's bumble bee resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; and adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to Crotch's bumble bee would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requirement of all vehicles and equipment be serviced in designated staging areas, and mandate that construction will not be conducted at night. In addition, Project implementation of **MM-BIO-9** (Focused Surveys for Crotch's Bumble Bee) would result in identification and avoidance of occupied nest resources for Crotch's bumble bee within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-9** (Focused Surveys for Crotch's Bumble Bee) would minimize the effect of potential construction-related indirect impacts to Crotch's bumble bee to **less than significant with mitigation incorporated.**

Long-Term: Potential long-term indirect impacts that could result from development near Crotch's bumble bee nest resources include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for Crotch's bumble bee; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to Crotch's bumble bee would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for nesting Crotch's bumble bee, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-BIO-6** (Open Space Conservation and Avoidance) will further buffer effects of urbanization through establishment of a minimum of 303.8 acres of conserved or avoided open

space and by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of potential long-term indirect impacts to Crotch's bumble bee to **less than significant with mitigation incorporated.**

6.3.2 Impact BIO-2: Sensitive Vegetation Communities

6.3.2.1 Direct Impacts

As stated in Section 5.1, Vegetation Communities and Land Covers, CDFW state rankings of 1, 2, or 3 are considered high priority for inventory or special-status and impacts to these communities typically require mitigation. The following vegetation communities are considered a sensitive biological resource by CDFW under CEQA: arroyo willow thickets, basket bush-river hawthorn-desert olive patches, bush penstemon scrub, chamise-sage chaparral, Eastwood manzanita chaparral, hairy leaf-woolly leaf ceanothus chaparral, needle grass-melic grass grassland, and sugarbush chaparral.

The Project will result in permanent impacts to 10.1 acres and temporary impacts to 0.5 acres of sensitive vegetation communities (Table 10), which would be considered a significant impact under CEQA absent mitigation. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of open space, including 10.4 acres of sensitive vegetation communities, that would be conserved and avoided by the proposed Project. Furthermore, all temporary impacts to sensitive vegetation communities would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands occurring outside of the MSHCP Conservation area and **MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area, and would be included in the open space once restoration is complete. Project implementation of **MM-BIO-3** (Local Development Mitigation Fee) would require that the Project pay an MSHCP Local Development Mitigation Fee to the City of Calimesa that will contribute to MSHCP land acquisition and conserved land management, which would include conservation of sensitive vegetation communities within Riverside County. Therefore, direct impacts to sensitive vegetation communities would be **less than significant with mitigation incorporated.**

The Project would also result in 1,153.8 acres of permanent impacts and 25.0 acres of temporary impacts to non-sensitive vegetation communities and land cover types that are not considered sensitive by CDFW (refer to Table 9A in Section 6.3, Impacts Analysis, for impacts to non-sensitive vegetation communities and land cover types within the study area). These direct impacts are considered less than significant under CEQA. However, all temporary impacts to non-sensitive vegetation communities and land cover types would be restored to pre-Project conditions, as required by **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) for uplands occurring outside of the MSHCP Conservation area and **MM-BIO-6** (Open Space Conservation and Avoidance) for uplands occurring within the MSHCP Conservation area. Unvegetated wash and river bottom is not recognized by CDFW (2022); however, unvegetated wash and river bottom may be jurisdictional by the RWQCB pursuant to Porter–Cologne Act or CDFW pursuant to Section 1602 of the California Fish and Game Code. Thus, impacts to unvegetated wash and river bottom may be considered significant under CEQA and are further addressed in Section 6.3.3.

Table 10. Impacts to Sensitive Vegetation Communities within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Acreage		
				Permanent	Temporary[2]	Open Space Preserve
Sensitive Vegetation Communities						
Grass and Herb Dominated						
Needle grass–melic grass grassland	*Nassella* spp.–*Melica* spp.	*Nassella pulchra–Avena* spp.–*Bromus* spp.	S3	0.5	<0.1	0.1
			Grass and Herb Dominated Subtotal	*0.5*	*<0.1*	*0.1*
Chaparral						
Chamise–sage chaparral	*Adenostoma fasciculatum–Salvia* spp.	*Adenostoma fasciculatum–Salvia mellifera–Rhus ovata*	S3	0.4	0	0
Eastwood manzanita chaparral	*Arctostaphylos glandulosa*	*Arctostaphylos glandulosa–Adenostoma fasciculatum–Quercus wislizeni*	S3	1.6	0	0
Hairy leaf–woolly leaf ceanothus chaparral	*Ceanothus (oliganthus, tomentosus)*	*Ceanothus tomentosus*	S3	0.1	0.2	3.5
Sugarbush chaparral	*Rhus ovata*	*Rhus ovata*	S3	5.2	0.3	4.8
			Chaparral Subtotal	*7.2*	*0.4*	*8.3*
Riparian						
Arroyo willow thickets	*Salix lasiolepis*	*Salix lasiolepis*	S3	0.1	0	0
Basket bush–river hawthorn–desert olive patches	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens*	*Sambucus nigra*	S3	<0.1	<0.1	2.0
			Riparian Subtotal	*0.1*	*<0.1*	*2.0*

Table 10. Impacts to Sensitive Vegetation Communities within the Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking[1]	Acreage		
				Permanent	Temporary[2]	Open Space Preserve
Sensitive Vegetation Communities						
Scrub						
Bush penstemon scrub	*Keckiella antirrhinoides*	*Keckiella antirrhinoides*	S3	2.4	0	0
			Scrub total	*2.4*	*0*	*0*
			Grand Total	**10.1**	**0.5**	**10.4**

Notes: Totals may not sum due to rounding.

1 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure

2 All temporary impacts to sensitive vegetation communities will be restored in place and included in the open space conservation once restoration is complete.

6.3.2.2 Indirect Impacts

Development of the Project has the potential to result in indirect impacts to special-status vegetation communities.

Construction-Related

Special-status vegetation communities may be indirectly impacted during future construction of the proposed Project. Potential short-term or temporary indirect impacts to special-status vegetation communities resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and the adverse effect of invasive plant species. These potential construction-related, indirect impacts to special-status vegetation communities would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring implementation of biological monitoring and a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, implementation of standard dust control measures, development of a SWPPP, and servicing of all vehicles and equipment in designated staging areas. Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would minimize the effect of construction-related indirect impacts to sensitive vegetation communities to **less than significant with mitigation incorporated.**

Long-Term

Potential long-term, indirect impacts that could result from development near sensitive vegetation communities include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to sensitive vegetation communities would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential long-term indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status plants. Additionally, **MM-BIO-6** (Open Space Conservation and Avoidance) would reduce potential long-term indirect impacts to a less-than-significant level by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area. Implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of long-term indirect impacts to sensitive vegetation communities to **less than significant with mitigation incorporated.**

6.3.3 Impact BIO-3: State or Federally Protected Wetlands

The study area supports a total of 4.98 acres of non-wetland waters and culverts potentially regulated by RWQCB and 18.40 acres of CDFW streambed, culverts, and riparian habitat. However, the ultimate decisions on the amount and location of jurisdictional resources are made by the resource agencies (i.e., USACE, CDFW, and RWQCB).

6.3.3.1 Direct Impacts

The Project would result in the permanent loss of 0.32 acres of non-wetland waters of the state potentially under the jurisdiction of RWQCB and 0.89 acres of streambed and riparian habitat potentially under CDFW jurisdiction (Table 11) (Figure 12 series, Impacts to Jurisdictional Aquatic Resources). The Project would also temporarily impact 0.01 acres of non-wetland waters of the state potentially under the jurisdiction of RWQCB and 0.12 acres of streambeds potentially under CDFW jurisdiction. The final aquatic resource impacts will be determined by the resource agencies (USACE, RWQCB, and CDFW) through the regulatory permitting process. These potential direct impacts to jurisdictional aquatic resources are considered significant absent mitigation under CEQA. Project implementation of **MM-BIO-11** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level by providing compensatory mitigation, restoring temporary impact areas, and obtaining permits from each of the regulatory agencies prior to ground-disturbing activities. Mitigation for permanent impacts will occur on site within the avoided tributary to San Timoteo Creek (NWW-5B) and will consist of a 1:1 ratio of establishment credit and 1:1 ratio of rehabilitation credit for a 2:1 mitigation ratio total. All temporary impacts to jurisdictional aquatic resources will be restored in place and protected in perpetuity either via conservation easement or deed restriction (or similar mechanism) once restoration is complete. Project implementation of **MM-BIO-6** (Open Space Conservation and Avoidance) would ensure that there is a minimum of 303.8 acres of conserved or avoided open space, including preservation of 4.66 acres of RWQCB aquatic resources and 17.50 acres of CDFW aquatic resources, that would be placed under either a conservation easement or deed restriction. Therefore, direct impacts to aquatic resources would be **less than significant with mitigation incorporated.**

Table 11. Impacts to Jurisdictional Aquatic Resources within the Study Area

Feature Type	RWQCB (Acreage)		CDFW (Acreage)	
	Permanent	Temporary	Permanent	Temporary
Non-wetland waters	0.28	0.01	0	0
Streambed	0	0	0.81	0.12
Culvert	0.03	0	0.03	0
Riparian	0	0	0.05	0
Grand Total	**0.32**	**0.01**	**0.89**	**0.12**

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.
Totals may not sum due to rounding. The RWQCB and CDFW acreage columns should not be summed together due to overlap between aquatic resources.

6.3.3.2 Indirect Impacts

Development of the Project has the potential to result in indirect impacts to jurisdictional aquatic resources.

Construction-Related

Jurisdictional aquatic resources may be indirectly impacted during construction. Potential short-term or temporary indirect impacts to jurisdictional aquatic resources resulting from construction activities include the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and unintentional clearing, trampling, or grading outside of the proposed construction zone. Construction-related indirect impacts to jurisdictional aquatic resources would be potentially significant.

MM-BIO-1 (Construction-Related Indirect Impacts to Biological Resources) would minimize construction-related indirect impacts through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, implementation of standard dust control measures, development of a SWPPP, and requiring all vehicles and equipment be serviced in designated staging areas. Therefore, construction-related indirect impacts to aquatic resources would be **less than significant with mitigation incorporated.**

Long-Term

Potential long-term indirect impacts that could result from development near jurisdictional aquatic resources include pollutants that could degrade water quality and habitat; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. Long-term indirect impacts to jurisdictional aquatic resources would be potentially significant.

MM-BIO-2 (Long-Term Indirect Impacts to Biological Resources) would minimize long-term indirect impacts to jurisdictional aquatic resources by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with jurisdictional aquatic resources. Therefore, long-term indirect impacts to jurisdictional aquatic resources would be **less than significant with mitigation incorporated.**

6.3.4 Impact BIO-4: Wildlife Corridors and Habitat Linkages

6.3.4.1 Direct Impacts

The study area does not contain any native wildlife nursery sites.

The study area provides local and regional wildlife movement opportunities within the Badlands. The study area supports a large tributary to San Timoteo Creek, and Garden Air Wash flows south of the southeastern boundary of the study area. These drainages provide opportunities for local wildlife movement between the Badlands and open lands within the study area. The study area is partially located within land described as Proposed Constrained Linkage 23, as described by the MSHCP.

The proposed Project has been designed to support the conservation goals for Proposed Constrained Linkage 23, prioritizing land conservation adjacent to Garden Air Wash and along the large tributary to San Timoteo Creek. The Project includes construction of one clear-span bridge across the tributary to San Timoteo Creek that will be for residential use. The bridge is being designed to avoid jurisdictional resources, with impacts consisting of construction activities that will not be restored or fuel modification activities, both of which are characterized as

permanent impacts. In total, up to 303.8 acres of open space will be put into conservation or avoided through implementation of **MM-BIO-6** (Open Space Conservation and Avoidance). The conservation of land at the southeastern portion of the Project will contribute to the Oak Valley Partners Conservation Land along Garden Air Wash, creating a corridor that is between 2,000 feet and 5,600 feet in total (accounting for both the Project conservation and Oak Valley Partners Conservation Land). Garden Air Wash is the feature described as Proposed Constrained Linkage 23 in the MSHCP. Given that the Project does not conflict with the conservation goals for Proposed Constrained Linkage 23, impacts associated with wildlife movement, wildlife corridors, and wildlife nursery sites would be **less than significant.**

6.3.4.2 Indirect Impacts

Development of the Project has the potential to result in indirect impacts to wildlife movement.

Construction-Related

Potential short-term or temporary indirect impacts to wildlife movement resulting from construction activities include adverse effects from noise, vibration, increased human presence, and nighttime lighting. These potential construction-related indirect impacts to wildlife movement would be potentially significant absent mitigation.

Project implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Program Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, and ensuring that construction will not be conducted at night. In addition, the Project will be constructed in four phases over 20 years, and therefore construction would not be expected to significantly disrupt wildlife movement due to ambient noise conditions and the ability for wildlife to continue to move around the construction area.

Implementation of **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) would minimize the effect of construction-related indirect impacts to wildlife corridors and habitat linkages to **less than significant with mitigation incorporated.**

Long-Term

Potential long-term indirect impacts to wildlife movement include chemical releases, such as oils and grease from vehicles that could degrade habitat; increased human presence; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and nighttime lighting. These potential long-term indirect impacts would be potentially significant absent mitigation.

Project implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impact areas (outside of the MSHCP Conservation area), preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to open space areas, and stipulations that night-lighting will not be directed toward open space areas. Additionally, **MM-BIO-6** (Open Space Conservation and Avoidance) would reduce potential long-term indirect impacts to a less-than-significant level by requiring restoration of temporary impacts to uplands within the MSHCP Conservation area.

Implementation of **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) and **MM-BIO-6** (Open Space Conservation and Avoidance) would minimize the effect of long-term indirect impacts to wildlife movement to **less than significant with mitigation incorporated.**

6.3.5 Impact BIO-5: Local Policies and Ordinances

The City of Calimesa General Plan and Oak Tree Preservation Ordinance

The City's General Plan Policy RM-13 states that native oak trees should be preserved whenever feasible, and that if preservation is not possible, trees should be replaced with oak trees of the same species at a ratio of 1:1. This policy is implemented through the City's Oak Tree Preservation Ordinance (Chapter 18.80), which protects heritage oak trees, protected oak trees, and stands of oak trees (oak groves). Additionally, Section 18.70.120 of the City's zoning code outlines regulations for the removal or encroachment of any qualifying non-oak trees (i.e., qualifying means any non-oak tree with a diameter at standard height greater than 24 inches).

The portion of the study area that overlaps the City of Calimesa contains 2,077 regulated tree species, including 2,041 protected and heritage oak trees and 36 qualifying mature non-oak trees (e.g., eucalyptus, blue elderberry, olive, etc.) that are subject to regulation under the City of Calimesa Municipal Code (refer to Appendix H for the Arborist Report detailing the tree inventory). The proposed Project would require removal of 1,152 regulated trees (including 887 protected oak trees, 250 heritage oak trees, and 15 qualifying mature non-oak trees) and encroachment of 126 regulated trees (including 50 protected oak trees, 70 heritage oak trees, and 6 qualifying mature non-oak trees). Removal and encroachment of a total of 1,278 regulated trees (i.e., oak and qualifying mature non-oak trees) would be considered a significant impact under CEQA absent mitigation. Implementation of **MM-BIO-12** (Tree Removal Mitigation) will require the Project applicant to prepare and submit a tree preservation and replacement plan for each phase of construction in conjunction with an application for a tree preservation and replacement permit from the City. Tree replacement shall occur at a 1:1 mitigation ratio with container trees or 9:1 with acorns for oak trees. The tree preservation and replacement plan shall detail long-term maintenance and monitoring for trees planted within and directly adjacent to the Project site. With implementation of **MM-BIO-12** (Tree Removal Mitigation), the proposed Project will not be in conflict with the City of Calimesa Municipal Code, and impacts would be **less than significant with mitigation incorporated.**

The City of Yucaipa Municipal Code

The City of Yucaipa requires an oak tree permit for the cutting, removal, encroachment into the protected zone, or relocation of any protected oak tree (City of Yucaipa Municipal Code 89.0515), which is defined as any oak tree of the Genus *Quercus*, except for scrub oak, that exceeds 2 inches in DSH. The protected zone of a tree is defined as "a specifically defined area totally encompassing an oak tree … using the dripline as a point of reference, the protected zone shall commence at a point five feet (5') outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than fifteen feet (15') from the trunk of an oak tree" (City of Yucaipa Municipal Code 89.0505).

There are no trees that are subject to regulation under the City of Yucaipa Municipal Code within the Project's off-site impact areas (refer to Appendix H for the Arborist Report detailing the tree inventory). Therefore, no direct impacts to City of Yucaipa–regulated trees are anticipated, and no avoidance or compensatory mitigation measures are required.

6.3.6 Impact BIO-6: Habitat Conservation Plans

Stephens' Kangaroo Rat Habitat Conservation Plan

The project site is located outside the Stephens' Kangaroo Rat HCP area (RCHCA 1996) and therefore is not subject to its requirements.

Western Riverside County Multiple Species Habitat Conservation Plan

An MSHCP Consistency Analysis and DBESP Report for the study area were prepared and submitted to the RCA as part of the amended JPR. The RCA provided Amended JPR Findings on March 10, 2025, finding the project consistent with the MSHCP. The Wildlife Agencies concurred with the DBESP on May 29, 2025. The following discussion provides information demonstrating that there are no conflicts with the MSHCP. Note that in order for the Project applicant to participate in the MSHCP, the Project applicant is required to pay a MSHCP Local Development Mitigation Fee to contribute to the funding required to implement the MSHCP, including acquisition of MSHCP Conservation Areas that provide habitat for MSHCP-covered species. The mitigation fee must be paid to the City prior to the issuance of a building permit, and the City transfers MSHCP fees to the RCA (**MM-BIO-3** [Local Development Mitigation Fee]).

Reserve Assembly

The study area is located within Subunit 2 (Badlands/San Bernardino National Forest) in the north-central portion of the Pass Area Plan. The southeastern corner of the study area overlaps seven Criteria Cells: Independent Cells 311, 323, 326, 396, 411, 412, and 417. Small slivers of the Project are located within Subunit Area 3 (San Timoteo Creek) along the western border of the study area. These slivers overlap Criteria Cells 225 and 302, both of which are a part of Cell Group E.

The RCA's Findings for JPR 07-01-08-01 found that the previous project was consistent with MSHCP Reserve Assembly requirements. Based on the 2025 RCA Amended Findings, the current Project has demonstrated that it will conserve equal or greater land in each Criteria Cell or Cell Group to remain consistent with the Reserve Assembly Findings in the previous JPR. Therefore, a Reserve Assembly analysis for each Cell or Cell Group under the current Project as compared to the previous JPR is provided in Section 5.5 of this report. All of the proposed conservation under the current Project for Cell Group E and all Independent Cells meets or exceeds the conservation proposed in the previous JPR. There will be an additional 9.48 acres added to the MSHCP Reserve compared to the previous JPR. Therefore. the proposed Project is consistent with the 2016 JPR findings.

MSHCP Section 6.1.2 Riparian/Riverine Areas and Vernal Pools

The study area contains 18.40 acres of MSHCP riparian/riverine resources, and the Project has been designed to avoid MSHCP riparian/riverine resources to the greatest extent practicable. A total of 17.50 acres (95%) of MSHCP riparian/riverine resources will be included in the open space preserve and placed under long-term protection (i.e., with a conservation easement or other protective mechanism). Direct permanent impacts to MSHCP riparian/ riverine resources total 0.89 acres, and direct temporary impacts to MSHCP riparian/riverine resources total 0.12 acres. Pursuant to the MSHCP, a DBESP report has been prepared (**MM-BIO-13** [MSHCP Consistency and Riparian/Riverine Mitigation]).

The study area contains approximately 2.2 acres of vegetation communities considered riparian habitat per the California Natural Community List (CDFW 2023c); however, this habitat is composed of small, isolated patches that are disconnected, and primarily dominated by Mexican elderberry, which is not traditionally considered an MSHCP riparian vegetation community requiring special protection. Therefore, only a portion of these areas (0.05 acres) is considered MSHCP riparian/riverine resources. Furthermore, this vegetation is lacking the species composition and habitat structure (i.e., not suitable) to support MSHCP riparian bird species, including least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo, and protocol surveys are not required.

The study area does not contain vernal pools or vernal pool indicator plants, depressions, cracked soils, or artificial features that may pond water (i.e., no stock ponds, road ruts, and/or human-made depressions occur within the study area). A review of historical aerial imagery did not result in areas that appear to support ponding. Finally, the site is mapped as either containing well-draining soils (i.e., sandy) not typically associated with holding water or soil types occurring on steep slopes with very high runoff that would not allow for ponding. As such, the study area is not suitable to support vernal pools or other fairy shrimp habitat. Therefore, with implementation of **MM-BIO-13** (MSHCP Consistency and Riparian/Riverine Mitigation), the Project does not conflict with MSHCP Section 6.1.2.

MSHCP Section 6.1.3 Narrow Endemic Plant Species

The study area is located within NEPSSA 8, which requires a habitat assessment for Yucaipa onion and many-stemmed dudleya. These species are generally associated with clay soils within upland habitats. Many-stemmed dudleya can also occur on sandstone outcrops. The study area does not support suitable clay soil or sandstone outcrops. The study area mostly supports loamy and sandy soil types. The study area is located outside of the known geographic range for many-stemmed dudleya (CCH 2022), with the nearest mapped occurrence located approximately 25 miles west of the study area (CDFW 2023c). However, given that the study area is located within the appropriate elevation range and contains suitable vegetation communities, focused surveys were conducted in 2022 and 2023 during the appropriate blooming period. Focused surveys for Yucaipa onion and many-stemmed dudleya were negative. As such, the Project does not conflict with Section 6.1.3 of the MSHCP.

MSHCP Section 6.1.4 Urban/Wildland Interface Guidelines

Proposed developments adjacent to MSHCP Conservation Areas may create edge effects that can impact conserved biological resources. The MSHCP provides several guidelines that address potential indirect effects from proposed developments that are in proximity to MSHCP Conservation Areas. These guidelines include measures addressing the quantity and quality of runoff generated by the development (i.e., drainage and toxics), night lighting, noise, non-native invasive plant species, barriers to humans and animal predators, and grading/land development encroachment. The Project proposes conservation that will contribute to the MSHCP Conservation Areas. In addition, the Project is adjacent to existing conserved lands. The Project is committed to following Urban/Wildland Interface Guidelines. Therefore, the Project does not conflict with MSHCP Section 6.1.4.

Drainage

The Project will incorporate measures to avoid the discharge of untreated surface runoff that could in any way make its way to any downstream waters. Measures, as outlined in **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources) will include those required for construction pursuant to the SWRCB General Construction Stormwater Permit and those required post-construction pursuant to the National Pollutant Discharge Elimination System and Municipal Storm Drain requirements. The development Project shall be designed to prevent the release of toxins, chemicals, petroleum

products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes downstream from the study area. In addition, post-construction best management practices are intended to help ensure that post-Project hydrologic conditions remain consistent with pre-Project conditions, thereby minimizing the potential for downstream erosion and/or sedimentation that could otherwise result from implementation of the Project.

Toxics

Land uses that use chemicals or generate bio-products that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure that the application of such chemicals does not result in discharge into downstream waters. Measures such as those implemented to address drainage issues would also result in avoidance of potential impacts relative to toxics.

Lighting

Temporary construction lighting and ambient lighting from any proposed development project is required to be selectively placed, directed, and shielded away from any MSHCP Conservation Areas. Measures, as outlined in **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources), will include ensuring that all night work includes lighting that faces active work areas and that is shielded to avoid light spillover. All lighting fixtures shall be located on the interior of work areas with a minimum 50-foot buffer from the edge of conservation lands. All permanent lighting shall be directed away from conservation lands.

Noise

Proposed noise-generating land uses affecting the MSHCP Conservation Areas would be required to incorporate setbacks, berms, or walls to minimize the effects of noise, as is outlined in **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources).

Invasives

The Project will not use invasive plants for erosion control, landscaping, wind rows, or other purposes. Specifically, no species listed in MSHCP Table 6-2, Plants that Should Be Avoided Adjacent to the MSHCP Conservation Areas, will be used in the Project landscape plans (including in the hydroseed mix used for interim erosion control), as is outlined in **MM-BIO-1** (Construction-Related Indirect Impacts to Biological Resources) and **MM-BIO-2** (Long-Term Indirect Impacts to Biological Resources).

Barriers

Proposed land uses adjacent to the MSHCP Conservation Areas shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into existing and future MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. The study area includes fuel modification zones and manufactured slopes adjacent to, but not within, MSHCP Conservation Areas. These land uses will function as a protective buffer between MSHCP Conservation Areas and more urbanized land uses.

Grading/Land Development

All manufactured slopes and fuel modification zones are included in the direct impact footprint and analyzed as permanent impacts. As such, there will be no impacts that extend beyond what is identified as the Project footprint.

Fuel Modification

Weed abatement and fuel modification zones are all considered a permanent impact but would not encroach into existing or planned MSHCP Conservation areas.

MSHCP Section 6.3.2 Additional Surveys

The study area is not within a CASSA for amphibian or mammal survey area. The study area is located within a CASSA for plant species and a habitat assessment area for burrowing owl.

Plants

The study area is located within CASSA 6, which requires a habitat assessment for Nevin's barberry, smooth tarplant, and round-leaved filaree. The study area is generally located outside of the geographic range for Nevin's barberry (CCH 2022) and does not contain clay soils that would support round-leaved filaree. The study area does contain suitable grassland habitat for smooth tarplant. However, given that the study area is located within the appropriate elevation range and contains suitable vegetation communities for these species, focused surveys were conducted in 2022 and 2023 during the appropriate blooming period. Focused surveys for Nevin's barberry, round-leaved filaree, and smooth tarplant were negative.

Burrowing Owl

Based on the results of the Step I habitat assessment, the study area does contain suitable habitat for burrowing owl. A total of 147 burrow features were mapped during the Step II-B focused burrow survey. Step II-B focused burrowing owl surveys conducted in 2022 for the on-site portion of the study area and in 2023 for the off-site portion of the study area were negative. Although burrowing owl were not detected during the survey, a pre-construction survey is required within 30 days prior to ground disturbance pursuant to the MSHCP to confirm conditions have not changed prior to construction (refer to **MM-BIO-4**, [Pre-Construction Burrowing Owl Survey]). The Project does not conflict with MSHCP Section 6.3.2.

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7 Project Mitigation

MM-BIO-1 Construction-Related Indirect Impacts to Biological Resources. For each phase of Project implementation, prior to issuance of a grading permit within 500 feet of MSHCP Conservation areas, proposed avoidance (including deed restricted areas), or suitable habitat for special-status species (i.e., all undeveloped land within the study area) with potential to occur in the study area, the Project's Applicant/Developer shall include the following in the construction contractor's plans and specifications to address indirect construction-related impacts to special-status species:

- **Biological Monitoring.** A qualified Project biologist shall monitor ground-disturbing and vegetation clearing activities for the duration of the Project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat, species of concern, and other sensitive biological resources outside the Project footprint. Once ground-disturbing and vegetation clearing activities are complete, the Project biologist shall conduct weekly checks in order to inspect construction fencing and ensure that all applicable requirements from the mitigation measures are being upheld.
- **Worker Environmental Awareness Program Training.** Prior to grading, a pre-construction meeting shall be required that includes a training session for Project personnel by a qualified biologist. The training shall include (1) a description of the species of concern and its habitats; (2) the general provisions of the applicable regulations pertaining to biological resources, including the Endangered Species Act and the Clean Water Act; (3) the need to adhere to the provisions of the Endangered Species Act, the Clean Water Act, and other applicable regulations; (4) the penalties associated with violating the provisions of the Endangered Species Act, Clean Water Act, and other applicable regulations; (5) the general measures that are being implemented to conserve the species of concern as they relate to the Project; and (6) the access routes to and study area boundaries within which the Project activities must be accomplished. Additionally, the training shall include the measures and mitigation requirements for the applicable resources. Copies of the mitigation measures and any required permits from the resource agencies shall be made available to construction personnel. The video can be recorded so that multiple personnel are able to watch the material. The training shall be provided in alternate languages, as needed.
- **Delineation of Property Boundaries.** Before beginning activities that would cause impacts, the contractor shall, in consultation with the biological monitor, clearly delineate the boundaries with fencing, stakes, or flags, consistent with the grading plan, within which the impacts will take place. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area. In addition, any avoided environmental resources shall be clearly delineated. Prior to implementing construction activities, the biological monitor shall verify that the flagging clearly delineates the construction limits and any sensitive environmental resources to be avoided.
- **Standard Dust Control Measures.** Standard dust control measures as per the South Coast Air Quality Management District shall be implemented to reduce dust impacts on nearby conserved lands, plants, and wildlife. Measures include controlling speed to 15 mph or less on unpaved roads, replacing ground cover in disturbed areas as quickly as possible, frequently

watering active work sites, installation of shaker plates, and suspending excavation and grading operations during periods of high winds.

- Stormwater Pollution Prevention Plan. Prior to issuance of a grading permit for construction, the Applicant shall submit a stormwater pollution prevention plan (SWPPP) to the City of Calimesa that specifies best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving off site and into receiving waters. The requirements of the SWPPP shall be incorporated into design specifications and construction contracts. Best management practices categories employed on site would include erosion control, sediment control, and non-stormwater (good housekeeping). Best management practices recommended for the construction phase shall include, but not be limited to, the following:
  - Limiting grading to the minimum area necessary for construction, operation, and decommissioning of the Project
  - Limiting vegetation disturbance/removal to the maximum extent practicable
  - Implementing fiber rolls and sandbags around drainage areas and the site perimeter
  - Stockpiling and disposing of demolition debris, concrete, and soil properly
  - Installation of a stabilized construction entrance/exit and stabilization of disturbed areas
  - Proper protections for fueling and maintenance of equipment and vehicles
  - Managing waste, aggressively controlling litter, and implementing sediment controls
  - Soil stabilization in disturbed areas by revegetation

The following water quality measures will be included in the SWPPP:

  - Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
  - Projects shall be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats shall be timed to avoid the breeding season of riparian species.
  - When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment-trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences to prevent debris or sediment from returning to the stream.
  - Water pollution and erosion control plans shall be developed and implemented in accordance with the Regional Water Quality Control Board.

- Minimize Spills of Hazardous Materials. All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills and contaminated soil shall be immediately cleaned up and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated staging area. Staging areas shall not be located within the MSHCP Conservation areas or avoidance areas.

- **Wildlife Hazards.** The following measures shall be implemented to ensure that wildlife do not become trapped, entangled, injured, or poisoned by constructuction activities:
  - Structures in which wildlife may become trapped (e.g., open pipes, pits, trenches, etc.) shall be tightly covered at the end of each work day. If covering the structure is not possible, an escape ramp shall be provided to allow any wildlife that falls in to safely escape.
  - Debris piles, construction materials, equipment, and other items that may be used as wildlife refuge shall be inspected for wildlife at the start of each work day and prior to disturbance. If wildlife is discovered, it shall either be moved out of harm's way by a qualified biologist or allowed to move off of the study area on its own.
  - Nets and mesh shall be made of loose-weave material that is not fused at the intersections of the weave, as nets with welded weaves present an entanglement risk.
  - Toxic materials and garbage shall be removed from the work site and safely stored or disposed of at the end of each work day.
- **Invasive Weeds.** In order to reduce the spread of invasive plant species, landscape plants shall not be those found in MSHCP Table 6-2, Plants that Should be Avoided Adjacent to the MSHCP Conservation Areas, or on the most recent version of the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php). For the duration of construction, if impacted areas are left bare and not under active ground disturbance for a period of 30 days or greater, these areas will be inspected by a qualified biologist for growth of non-native plant species listed as Moderate or High by the Cal-IPC (e.g., stinknet [*Oncosiphon pilulifer*], Maltese star-thistle [*Centaurea melitensis*]). If detected, these species, with the exception of non-native grasses, shall be removed by a qualified landscape contractor with experience in native ecosystems by mechanical means (e.g., mowing, string trimming) or application of herbicide by a California licensed applicator within 5 days of detection. These removal efforts will focus on removal prior to seed setting/development. All material from species with a Cal-IPC rating of Moderate or High will be bagged, removed, and disposed of off site.
- **Night Work.** All short-term construction lighting shall be facing active work areas only and shall be shielded to avoid light spillover and shall be directed away from Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation areas and avoidance areas to protect species from direct lighting. If lighting is required during construction activities that would occur during or after sunset, the lighting fixtures shall be located on the interior of work areas with a minimum 50-foot buffer from the edge of any MSHCP Conservation areas or the adjacent open space.

MM-BIO-2 Long-Term Indirect Impacts to Biological Resources. For each phase of Project implementation, prior to issuance of a construction permit within 500 feet of Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation areas, proposed avoidance (including deed restricted areas), or suitable habitat for special-status species (i.e., all undeveloped land within the study area) with potential to occur in the study area, the Project's Applicant/Developer shall include in the construction plans and specifications the following to address indirect impacts to special-status species:

- **Runoff.** Future development within 500 feet of the MSHCP Conservation areas, deed restricted areas, proposed avoidance, or suitable habitat for special-status species shall incorporate measures, including measures required through the National Pollutant Discharge Elimination

System requirements, to ensure that the quantity and quality of runoff discharged is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into proposed avoidance or suitable habitat for special-status species. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

- Toxicants. Land uses that use chemicals or generate bioproducts, such as manure, fertilizer, or vineyard waste, that are potentially toxic or may adversely affect plant species, wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharges. Measures such as those employed to address drainage issues shall be implemented.
- Lighting. All permanent night lighting shall be shielded and directed downward and away from MSHCP Conservation areas and deed restricted areas to protect species from direct night lighting. All lighting shall be in compliance with Municipal Code Section 18.120.060, which requires preparation and submittal of a Lighting Plan, which must be prepared and certified by a qualified lighting engineer and submitted to the City for review/approval. For any Project areas adjacent to the MSHCP Conservation area, the Lighting Plan shall identify the locations of all lighting fixtures, the orientation of the fixtures, the types of shielding that will be used to avoid the production of nighttime lighting and glare, the type of shielding that would prohibit light spill, and how the effectiveness of the fixtures would be monitored and confirmed to function properly. Post-Project ambient light levels within the MSHCP Conservation area shall not exceed that of pre-Project conditions as a result of light spill from the Project site. A responsible party, such as a Homeowners Association or other legally recognized entity, will be assigned prior to occupancy and will be responsible for maintaining the lighting in perpetuity. For the Business Park zone, the property owner will be the legally recognized entity. If the Regional Conservation Authority (RCA) provides notice of lighting issues during their routine monitoring of the MSHCP Conservation area, any lighting issues will be addressed within 30 days of receiving input from the RCA.
- Noise. Proposed noise-generating land uses affecting the MSHCP Conservation area and proposed open space areas containing suitable habitat for special-status species shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards.
- Invasive Species. When approving landscape plans for future development, emphasis shall be placed on using native species that occur in the region. Invasive, non-native plant species listed in MSHCP Table 6-2, Plants that Should be Avoided Adjacent to the MSHCP Conservation Areas, or on the most recent California Invasive Plant Council (Cal-IPC) inventory (https://www.cal-ipc.org/plants/inventory/) with a rating of moderate or high shall not be included in landscaping.
- Restoration of Temporary Impacts (Uplands Outside of the MSHCP Conservation Area): Temporary impacts to uplands outside of the MSHCP Conservation area will be restored in-place at a 1:1 ratio. Prior to issuance of a grading or construction permit for the Project, grading

and construction plans shall include the following note regarding any temporary impacts to uplands outside the MSHCP Conservation Areas:

- Site construction areas subjected to temporary ground disturbance in undeveloped areas shall be hydroseeded with a native seed mix developed by a qualified biologist and reviewed and approved in writing by the RCA during the first fall (September through October) following the completion of construction and would be subject to non-native plant control methods outlined in MM-BIO-1 if left bare for a period of 30 days or greater prior to hydroseeding. The hydroseeded areas will be inspected by a qualified biologist for growth of non-native plant species listed as Moderate or High by Cal-IPC on a quarterly basis (June through January) and monthly during the growing season (approximately February through May) for 1 year following hydroseeding. All species listed as Moderate or High by Cal-IPC will be removed following the methods outlined in MM-BIO-1. After the first year, the frequency of the maintenance and monitoring may be adjusted based on a determination by a qualified biologist and will cease after 5 years or once the final success criteria have been met (i.e., absolute cover of native species reflects pre-Project conditions and absolute cover of vegetation within the temporary impact areas are equal to or better than pre-Project condition). A memo will be provided to the RCA demonstrating completion (including photographs). These activities will be included in and implemented as part of the Project construction schedule.

- Signage and Barriers. Future development shall incorporate barriers, where appropriate in individual Project designs, to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in proposed open space areas and/or suitable habitat for special-status wildlife. If fencing is specified, such barriers may include native landscaping, rocks/ boulders, fencing, walls, signage, and/or other appropriate mechanisms.

  Fencing shall be designed to prevent access to the MSHCP Conservation area and deed restricted areas by unauthorized public access, domestic animals, and illegal trespass or dumping. The design shall meet the following minimum requirements: barriers with a minimum height of 6 feet with no greater than 2-inch openings (i.e., tubular steel fencing with tines set on 2-inch centers, block wall, chain link fence, or other barrier impermeable to domestic animals and wildlife) and a metallic or masonry component (i.e., concrete footing or wire mesh cloth) buried to a minimum depth of 12 inches below ground surface level to prevent domestic animals from gaining access to the MSHCP Conservation area or deed restricted areas by digging under. This fencing shall be installed at the interface with the MSHCP Conservation area and deed restricted areas, as well as other portions of the Project where access to the MSHCP Conservation area and deed restricted areas could be achieved. A responsible party, such as a Homeowners Association or other legally recognized entity, will be assigned prior to occupancy and will be responsible for maintaining the fencing in perpetuity. For the Business Park zone, the property owner will be the legally recognized entity. If the RCA provides notice of fencing issues during their routine monitoring of the MSHCP Conservation area, any fencing issues will be fixed within 30 days of receiving input from the RCA.

  The Project shall not include any trailhead connections to existing trails within the MSHCP Conservation area and proposed open space areas, including deed restricted areas, within the Specific Plan area. The Project shall implement appropriate signage to inform users of the onsite trails to the importance of preservation of native flora and fauna, and shall install

barriers, as appropriate, to keep people and domestic animals on the designated on-site trail system.

MM-BIO-3 Local Development Mitigation Fee. The Project shall make payment of the MSHCP Local Development Mitigation Fee to the City of Calimesa prior to issuance of a Certificate of Occupancy for each phase of Project implementation. Proof of payment shall be provided to the City of Calimesa.

MM-BIO-4 Pre-Construction Burrowing Owl Survey. A qualified biologist shall conduct a 30-day pre-construction survey for burrowing owls prior to initial ground-disturbing activities for each phase of Project implementation (including vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, grading, etc.) to assess whether any burrowing owls have colonized the site in the days or weeks preceding the ground-disturbing activities. The pre-construction survey will occur within suitable habitat for burrowing owl (i.e., all undeveloped habitats). If burrowing owls have colonized the study area prior to the initiation of ground-disturbing activities, the Project applicant shall immediately inform the Regional Conservation Authority (RCA), and the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS), and will need to coordinate further with RCA, CDFW, and USFWS; occupation of the study area by burrowing owl has the possibility to result in the preparation of a burrowing owl protection plan prior to initiating ground disturbance. If ground-disturbing activities occur but the site is left undisturbed for more than 30 days, a pre-construction survey shall again be necessary to ensure burrowing owl has not colonized the site since it was last disturbed. If burrowing owl is found, the same coordination described above will be necessary.

MM-BIO-5 Pre-Construction Fossorial Small Mammal Clearance Surveys. Pre-construction clearance surveys for special-status small mammals shall be conducted by a qualified Project biologist within 14 days of the initiation of ground disturbance or vegetation clearing within and adjacent to construction areas. The clearance surveys will occur within suitable habitat for southern grasshopper mouse and Dulzura pocket mouse (i.e., all undeveloped habitat with the exception of riparian and ornamental land covers). A pre-construction survey shall be conducted prior to each phase of Project implementation. Prior to initiation of the clearance surveys, a smooth wildlife exclusion fence (e.g., Animex) shall be installed around the impact area (noting that construction will be phased and the fencing should only surround the present construction phase). The fence shall be installed around the impact area to prevent special-status small mammals from reentering the site during construction after removal from the work area. Prior to the commencement of construction activities, a qualified biologist shall conduct 3 nights of small-mammal trapping within the fenced work area outside of inundated areas, intended to trap special-status small mammal species with potential to occur, including Dulzura pocket mouse and southern grasshopper mouse. If small mammals are captured in the proposed construction area, they shall be relocated to suitable habitat outside of the impact area by a qualified biologist.

Surveys need not be conducted in all areas simultaneously, as long as they are conducted within 14 days of the initiation of ground disturbance or vegetation clearing in each area individually. If possible, non-listed special-status wildlife species may be captured and relocated to suitable habitat nearby where they are safe from construction activities. Surveys and relocation of these species may only be conducted by the qualified Project biologist.

- If non-listed special-status reptiles or small mammals are detected, they shall be moved out of harm's way.
- The Project biologist shall remain available at all times after initiation of ground disturbance or vegetation clearing, in case special-status wildlife species enter the construction area. If non-listed special-status species are detected in the construction area after initiation of ground disturbance or vegetation clearing, the qualified Project biologist shall take measures to move the species, or encourage it to move, to a safe place away from construction activities.

MM-BIO-6 Open Space Conservation and Avoidance. A total of 303.8 acres of on-site open space shall be conserved or avoided with Project implementation. Of that total, 64.2 acres contributing to Proposed Constrained Linkage 23 shall be included in the MSHCP Conservation area and placed under long-term protection (i.e., with a conservation easement or through a transfer of the land to the RCA in fee title), 1.8 acres of MSHCP riparian/riverine on-site mitigation shall be placed under a conservation easement, and 16.2 acres of MSHCP riparian/riverine resources will be placed under a deed restriction. The remaining open space shall be protected via the "open space" designation within the Specific Plan. A summary of the Project's open space protective mechanisms is provided in the table below. The totals included in the table below are inclusive of all on-site temporary impacts because temporary impacts shall be restored and protected following completion of restoration activities, as described below and in MM-BIO-13. The amount of temporary impact included in each total is denoted in parentheses next to each entry.

Temporary impacts to uplands within the MSHCP Conservation area shall be restored on site and in place at a 1:1 ratio. Prior to issuance of a grading or construction permit for the Project, a habitat mitigation and monitoring plan shall be prepared for restoration of the temporary impact areas to uplands within the MSHCP Conservation area. The habitat mitigation and monitoring plan shall include but is not limited to a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Once success criteria are met, the restoration lands will be added to the conservation easement that covers the remainder of the lands incorporated into the MSHCP Conservation area and shall be conserved and managed in perpetuity. Any entity performing long-term management of the restoration lands shall be funded in perpetuity. If long-term management of the restoration lands is conducted by the RCA, an endowment will be needed for the management of those lands where management would occur beyond the requirements described in MSHCP Chapter 5, Management and Monitoring.

Summary of the Protective Mechanisms for the Project's Open Space Areas

Type of Protective Mechanism	Resource Type	Within Criteria Cells (Acreage of Temp Impact)	Outside Criteria Cells (Acreage of Temp Impact)	Total (Acreage of Temp Impact)
Conservation Easement or Fee Title Transfer	MSHCP Conservation	64.2 (2.9)	0 (0)	64.2 (2.9)
	MSHCP Riparian/Riverine On-Site Mitigation	1.8 (0)	0 (0)	1.8 (0)
Deed Restriction	Avoided MSHCP Riparian/ Riverine Resources	3.2 (0.1)	13.0 (<0.1)	16.2 (0.1)

Summary of the Protective Mechanisms for the Project's Open Space Areas

Type of Protective Mechanism	Resource Type	Within Criteria Cells (Acreage of Temp Impact)	Outside Criteria Cells (Acreage of Temp Impact)	Total (Acreage of Temp Impact)
Specific Plan Designated Open Space	Open Space Avoidance Areas	41.6 (4.5)	180.0 (15.0)	221.6 (19.5)
	Total	**110.8 (7.5)**	**193.0 (15.0)**	**303.8 (22.5)**

Notes: Temp = temporary; MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
Totals may not sum precisely due to rounding.

Conveyance of the MSHCP Conservation area shall occur prior to issuance of the initial grading permit. If a conservation easement is proposed, the entity responsible for managing the lands in perpetuity shall execute a Memorandum of Understanding with the RCA, ensuring that the lands are counted toward the MSHCP Conservation area and allowing the RCA and its contractors access to perform annual monitoring and site inspections.

MM-BIO-7 Pre-Construction American Badger Surveys and Avoidance. For each phase of Project implementation, prior to issuance of a grading permit within 500 feet of Western Riverside County Multiple Species Habitat Conservation Plan Conservation Lands, proposed conserved or avoided open space, or suitable habitat for American badger (i.e., all chaparral, disturbed, grass, and scrub habitat), construction plans and conditions of approval shall include the following to address indirect construction-related impacts to American badger. Specifically, impacts to American badger individuals and wintering and natal dens shall be avoided and minimized during construction activities through the following measures.

Pre-Construction Surveys (Wintering)

During the colder months (generally between November 1 and February 15, when daily temperatures do not exceed 45°F), pre-construction surveys shall be conducted by the Project biologist in suitable habitat no earlier than 14 days prior to construction activities to determine whether American badger winter dens are present within the construction zone or within 100 feet of the construction zone boundary. A pre-construction survey shall be conducted prior to each phase of Project implementation.

Avoidance Measures (Wintering)

If an American badger winter den is occupied within the construction zone or within 100 feet of the construction zone, then the den location shall be clearly marked with fencing or flagging in a manner that does not isolate the badger from intact adjacent habitat or prevent the badger from accessing the den, to avoid inadvertent impacts on the den. If it is not practicable to avoid the wintering den during construction activities, an attempt shall be made to trap or flush the individual and relocate it to suitable open space habitat. Additionally, badgers can be relocated by slowly excavating the burrow, either by hand or mechanized equipment under the direct supervision of the Project biologist, removing no more than 4 inches at a time. After necessary trapping, flushing, or burrow excavation is completed, construction may proceed, and the vacated winter den may be collapsed. If trapping is required, trapping shall be limited to November 16 through the last day of

February in accordance with Section 461, Title 14 of the California Code of Regulations (14 CCR 461). A written report documenting the badger removal shall be provided to the California Department of Fish and Wildlife within 30 days of relocation.

Pre-Construction Surveys (Natal Dens)

During the late winter and summer (generally from March 15 through July 31), when American badgers may use natal dens for birthing and pup rearing, pre-construction surveys shall be conducted by the Project biologist no earlier than 14 days prior to ground-disturbing construction activities to determine whether American badger natal dens are present within the Project construction zone or within 200 feet of the construction zone. A pre-construction survey shall be conducted prior to each phase of Project implementation.

Avoidance Measures (Natal Dens)

If natal dens are detected during construction, construction activities shall be halted within 200 feet of the natal den. This buffer may be reduced based on the location of the den or type of construction activity, based on the direction of the Project biologist. Construction activities shall not preclude the ability of the documented badgers to disperse to on-site open space or off-site habitat when the natal den is vacated (i.e., habitat suitable for dispersal must be maintained until dispersal occurs). Construction shall be postponed or halted in these areas until it is determined by the Project biologist that the young are no longer dependent on the natal den. To avoid inadvertent impacts during construction and to ensure that construction activities are at least 200 feet from active natal dens, any active natal dens within the survey area shall be clearly marked with fencing or flagging in a manner that shall not inhibit normal behavioral activities (e.g., foraging and dispersing from the site) by the mother and pups.

MM-BIO-8 Pre-Construction Reptile Clearance Surveys. Pre-construction clearance surveys for special-status wildlife shall be conducted by a qualified Project biologist within 14 days of the initiation of ground disturbance or vegetation clearing within and adjacent to construction areas. The clearance surveys will occur within suitable habitat for Southern California legless lizard, California glossy snake, and coast patch-nosed snake (i.e., all undeveloped habitat with the exception of disturbed habitat). A pre-construction survey shall be conducted prior to each phase of Project implementation. Surveys shall be appropriate for detecting potentially occurring species, such as Southern California legless lizard, California glossy snake, and coast patch-nosed snake. Surveys need not be conducted in all areas simultaneously, as long as they are conducted within 14 days of the initiation of ground disturbance or vegetation clearing in each area individually. If special-status species are detected, appropriate buffers shall be established, as necessary and as appropriate for the species, unless it is not feasible to avoid the species. If possible, non-listed special-status wildlife species may be captured and relocated to suitable habitat nearby where they are safe from construction activities. Surveys and relocation of these species may only be conducted by the qualified Project biologist.

- If non-listed special-status reptiles or small mammals are detected, they shall be moved out of harm's way.
- The Project biologist shall remain available at all times after initiation of ground disturbance or vegetation clearing, in case special-status wildlife species enter the construction area. If non-

listed special-status species are detected in the construction area after initiation of ground disturbance or vegetation clearing, the qualified Project biologist shall take measures to move the species, or encourage it to move, to a safe place away from construction activities.

MM-BIO-9 Focused Surveys for Crotch's Bumble Bee. Focused surveys for Crotch's bumble bee shall be conducted by a qualified biologist, with expertise in surveying for bumble bees, within the construction footprint prior to the start of ground-disturbing construction activities that would occur during the Crotch's bumble bee queen flight season through the colony active period (February 1 through August 31). The focused surveys shall be conducted prior to each phase of Project implementation and shall include (1) a habitat assessment and (2) focused surveys in accordance with the recommendations described in the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species, released by the California Department of Fish and Wildlife (CDFW) on June 6, 2023, or the most current version at the time of construction. Focused surveys shall be repeated within suitable habitat each year ground-disturbing construction activities within suitable habitat are scheduled to occur during the queen flight season through the colony active period (February 1 through August 31).

The habitat assessment shall be conducted concurrently with the focused surveys and shall, at a minimum, include historical and current species occurrences; document potential on-site habitat including foraging, nesting, and/or overwintering resources; and identify which plant species are in bloom during the focused surveys, as well as their percent cover. Incidental observations of potential nest resources will also be noted. For the purposes of this mitigation measure, potential nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, grass thatch, hollow trees, rock and brush piles, and human-made structures that may support bumble bee colonies, such as birdhouses. Potential overwintering resources are defined as bare soil, leaf litter, pine needle duff layer, and bunch grasses.

Focused surveys shall include at least three on-site surveys that are spaced 2 to 4 weeks apart. The timing of these surveys shall coincide with the queen flight season through the colony active period (February 1 through August 31); they shall also coincide with the blooming season of floral food sources). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys shall not be conducted during wet conditions (e.g., foggy, rainy, or drizzling) and surveyors shall wait at least 1 hour following rain. Optimal surveys are conducted when there are sunny to partly sunny skies, temperatures between 65°F and 90°F, and winds less than 8 mph. Surveys may be conducted outside these weather parameters if other bees or butterflies are observed flying. A qualified biologist who is in possession of a valid Memorandum of Understanding with CDFW (and valid Scientific Collecting Permit, if applicable) shall conduct capture surveys and record non-lethal photo vouchers of all captured bumble bees in accordance with the CDFW Survey Considerations for CEQA Candidate Bumble Bee Species document (June 2023).

A written survey report shall be submitted to the City of Calimesa and CDFW within 30 days following completion of the focused surveys. The report shall include survey methods, weather conditions, and survey results, including a detailed habitat assessment, floral resources blooming and percent cover, bumble bee species observed, floral species bumble bees were observed visiting, nesting and overwintering habitat surveyed, and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report shall include the qualifications/resumes of the surveyor(s) and approved taxonomist(s) for identification of photo

vouchers. If Crotch's bumble bee nests or individuals are observed, the location information shall be submitted to the California Natural Diversity Database at the time of, or prior to, submittal of the survey report. In addition, if avoidance of take is not feasible, the applicant shall consult with CDFW to determine if take authorization is required. If Crotch's bumble bee is not detected during the focused surveys, no further action or mitigation would be required.

If required, mitigation for direct impacts to Crotch's bumble bee shall be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, to be fulfilled through the protection of 303.8 acres of open space, 64.2 acres of which shall be included in the MSHCP Conservation area (MM-BIO-6), along with payment of the Local Development Mitigation Fees that contribute to the conservation of land in western Riverside County (MM-BIO-3). If required by the permitting process, additional mitigation may be required through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately into the MSHCP Conservation Area, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity, in coordination with CDFW. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall account for all management activities required to fulfill the requirements of the conservation easement(s), which are currently under review and development by CDFW.

MM-BIO-10 Pre-Construction Nesting Bird Survey. Construction activities shall avoid the migratory bird nesting season (typically January 1 through October 31 for white-tailed kite, and from February 1 through August 31 for all other species), as feasible, to reduce any potential significant impact to birds that may be nesting within the construction area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the study area and within 500 feet of all impact areas must be conducted to determine the presence/absence of fully protected species (including white-tailed kite), protected migratory birds, and active nests. A pre-construction survey shall be conducted prior to each phase of Project implementation. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when an active nest buffer is in place. No Project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active.

Although protocol-level surveys for coastal California gnatcatcher are not required per the Western Riverside Multiple Species Habitat Conservation Plan, applicants are required (per the USFWS Special Terms and Conditions for Permit TE-088609-0) to avoid clearing coastal California gnatcatcher-

occupied habitat in the Criteria Area and in Public-Quasi/Public Lands between March 1 and August 15. If potential occupied habitat is determined present based on incidental observations (e.g., sightings, calls, etc.), all habitat clearing, grubbing, grading, and associated construction actions shall be timed to avoid the active breeding season for California gnatcatcher (March 1 to August 15) within the Criteria Cells and/or Public/Quasi-Public Lands. If impacts to potential occupied habitat within the Criteria Cells and/or Public/Quasi-Public Lands cannot be avoided from March 1 through August 15, a focused protocol-level survey for coastal California gnatcatcher shall be implemented to prove species absence from the habitat. If a coastal California gnatcatcher nest is detected, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 500 feet). The nest area shall be avoided until the nest is vacated, and the juveniles have fledged.

MM-BIO-11 Aquatic Resource Avoidance, Permitting, and Protection. Prior to construction activity within waters under Regional Water Quality Control Board (RWQCB) jurisdiction, the Project Applicant/Developer shall coordinate with the Santa Ana RWQCB (Region 8) to ensure conformance with the requirements of the Porter–Cologne Water Quality Control Act. Prior to activity within California Department of Fish and Wildlife (CDFW) jurisdictional streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements. Prior to activity within Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) riparian/riverine resources, the applicant shall coordinate with the City of Calimesa, Regional Conservation Authority (RCA), CDFW, and the U.S. Fish and Wildlife Service (USFWS) to demonstrate consistency with the MSHCP.

Future development shall mitigate for permanent impacts to jurisdictional aquatic resources through the completion of a restoration program at an Applicant/Developer-sponsored mitigation site. Completion of the restoration program shall ensure no net loss of waters and include a minimum of a 1:1 ratio of impacts to establishment or re-establishment and a 1:1 ratio of impacts to rehabilitation (2:1 ratio total). A habitat mitigation and monitoring plan shall be prepared in accordance with resource agency guidelines and approved by the agencies (i.e. RCA, CDFW, USFWS, and RWQCB) in accordance with the proposed program permits. The habitat mitigation and monitoring plan shall include but is not limited to a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any applicant-sponsored mitigation shall be conserved and managed in perpetuity via a conservation easement. Any entity performing long-term management of the mitigation lands shall be funded in perpetuity. If long-term management of the mitigation lands is conducted by the RCA, an endowment will be needed for the management of those lands where management would occur beyond the requirements described in MSHCP Chapter 5, Management and Monitoring.

In the event that the Applicant/Developer-sponsored mitigation is not viable, mitigation for permanent impacts shall be completed through a purchase of credits at a 2:1 ratio (which includes a minimum of 1:1 re-establishment and 1:1 re-establishment and/or rehabilitation credits) from an approved mitigation bank within the MSHCP Plan Area.

Temporary impacts to jurisdictional aquatic resources shall be restored in place (i.e., at a 1:1 ratio). Restoration activities shall be described in a habitat mitigation and monitoring plan that shall be reviewed and approved by the appropriate entities (i.e., RCA, CDFW, USFWS, and RWQCB). Following completion of the restoration program, the restored areas shall be protected via a deed restriction.

MM-BIO-12 Tree Removal Mitigation. Prior to the issuance of grading permits for each phase of Project implementation, the Project Applicant/Developer shall prepare and submit an oak tree and qualifying non-oak tree (i.e., qualifying means any non-oak tree with a diameter at standard height greater than 24 inches) preservation and replacement plan for each phase of construction in conjunction with an application for a tree preservation and replacement permit from the City of Calimesa (Chapter 18.80.060 of the City's Oak Tree Preservation Ordinance and Section 18.70.120 of the City's zoning code). This preservation and replacement plan shall detail long-term maintenance and monitoring for trees planted within and directly adjacent to the Project site. This plan shall also require that the Homeowners Association contract and fund an ISA Certified Arborist for long-term monitoring with authority in decisions regarding tree care and maintenance. The plan shall also have requirements for funding replacement tree planting procedures, if necessary.

Tree replacement within the City of Calimesa shall occur at a 1:1 mitigation ratio with container trees or 9:1 with acorns for oak trees. The replacement of mature trees, including oak or qualifying mature non-oak, shall occur with a minimum of 36-inch box specimen trees at a 1:1 mitigation ratio. Per the City's tree mitigation requirements and based on the proposed Project's impacts, the proposed mitigation planting shall include a mixture of acorns, 1-gallon, 15-gallon, 24-inch box, 36-inch box, 48-inch box, and 60-inch box trees to mitigate the removal and encroachment of 1,257 protected/heritage oak trees and 21 qualifying mature non-oak trees. Therefore, to mitigate the removal and encroachment of up to 1,257 oak trees, a minimum of 3,394 acorns, 251 1-gallon trees, 189 15-gallon trees, 189 24-inch box trees, 126 36-inch box trees, 63 48-inch box trees, and 63 60-inch box oak trees shall be planted. The 3,394 acorns, 251 1-gallon trees, and 189 15-gallon trees shall be planted within the site's preserved oak woodlands and open space conservation areas, and the 189 24-inch box trees, 126 36-inch box trees, 63 48-inch box trees, and 63 60-inch box trees shall be incorporated into the site's developed landscape, parks, and street master plan. Furthermore, to mitigate the removal and encroachment of the 21 qualifying mature non-oak trees, a minimum of 21 36-inch box trees shall be planted within the site's developed landscape. Replacement tree species shall be selected from a list of pre-approved species from the City of Calimesa.

The City of Calimesa Municipal Codes state that if all the mitigation trees cannot be accommodated on site, an in-lieu payment of the replacement cost for each tree removed may be accepted. Based on a review of the July 2023 Land Use Plans for the proposed Project, the site can accommodate all the required mitigation trees. However, should it be found that the site cannot accommodate all mitigation trees, the Project applicant shall work closely with the City of Calimesa to identify off-site planting locations and/or pay the in-lieu fee for the replacement cost of those trees that cannot be accommodated on site.

Because impacts associated with the County Line Road off-site improvements have not been finalized, prior to commencement of any earthwork occurring within the off-site improvement areas associated with County Line Road, an International Society of Arboriculture certified arborist shall

be retained to confirm whether findings in the Arborist Report for the Mesa Verde Specific Plan Area 2 Amendment 2 (Dudek 2024) are still accurate, or whether adjustments in tree replacements are needed.

MM-BIO-13 MSHCP Consistency and Riparian/Riverine Mitigation. Prior to Project approval, the Project Applicant/Developer shall complete a Joint Project Review (JPR) with the City of Calimesa, Regional Conservation Authority (RCA), California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS). The complete JPR shall include the Project Applicant/Developer's final Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis and final Determination of Biologically Equivalent or Superior Preservation (DBESP) Report. The DBESP Report shall include the proposed mitigation for MSHCP riparian/riverine resources, as summarized below.

Future development shall mitigate for permanent impacts to MSHCP riparian/riverine resources through completion of a restoration program at an Applicant/Developer-sponsored mitigation site. Completion of the restoration program shall ensure no net loss of MSHCP riparian/riverine resources and include a minimum of a 1:1 ratio of impacts to establishment or re-establishment and a 1:1 ratio of impacts to rehabilitation (2:1 ratio total). A habitat mitigation and monitoring plan shall be prepared in accordance with resource agency guidelines and approved by the appropriate entities (RCA and the Wildlife Agencies [CDFW and USFWS]), as well as any applicable water-regulating entities (e.g., Regional Water Quality Control Board) in accordance with the received permits. The habitat mitigation and monitoring plan shall include but is not limited to a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any Applicant/Developer-sponsored mitigation shall be conserved and managed in perpetuity via a conservation easement. Any entity performing long-term management of the mitigation lands shall be funded in perpetuity. If long-term management of the mitigation lands is conducted by the RCA, an endowment will be needed for the management of those lands where management would occur beyond the requirements described in MSHCP Chapter 5, Management and Monitoring.

In the event that the Applicant/Developer-sponsored mitigation is not viable, mitigation for permanent impacts shall be completed through a purchase of credits at a 2:1 ratio (which includes a minimum of 1:1 re-establishment and 1:1 re-establishment and/or rehabilitation credits) from an approved mitigation bank within the MSHCP Plan Area.

Temporary impacts to MSHCP riparian/riverine resources shall be restored in place (i.e., at a 1:1 ratio). Restoration activities shall be described in a habitat mitigation and monitoring plan that shall be reviewed and approved by the appropriate entities. Following completion of the restoration program, the restored areas shall be protected via a deed restriction. The temporarily impacted MSHCP riparian/riverine resources are not located within the MSHCP Conservation area and therefore a conservation easement is not required.

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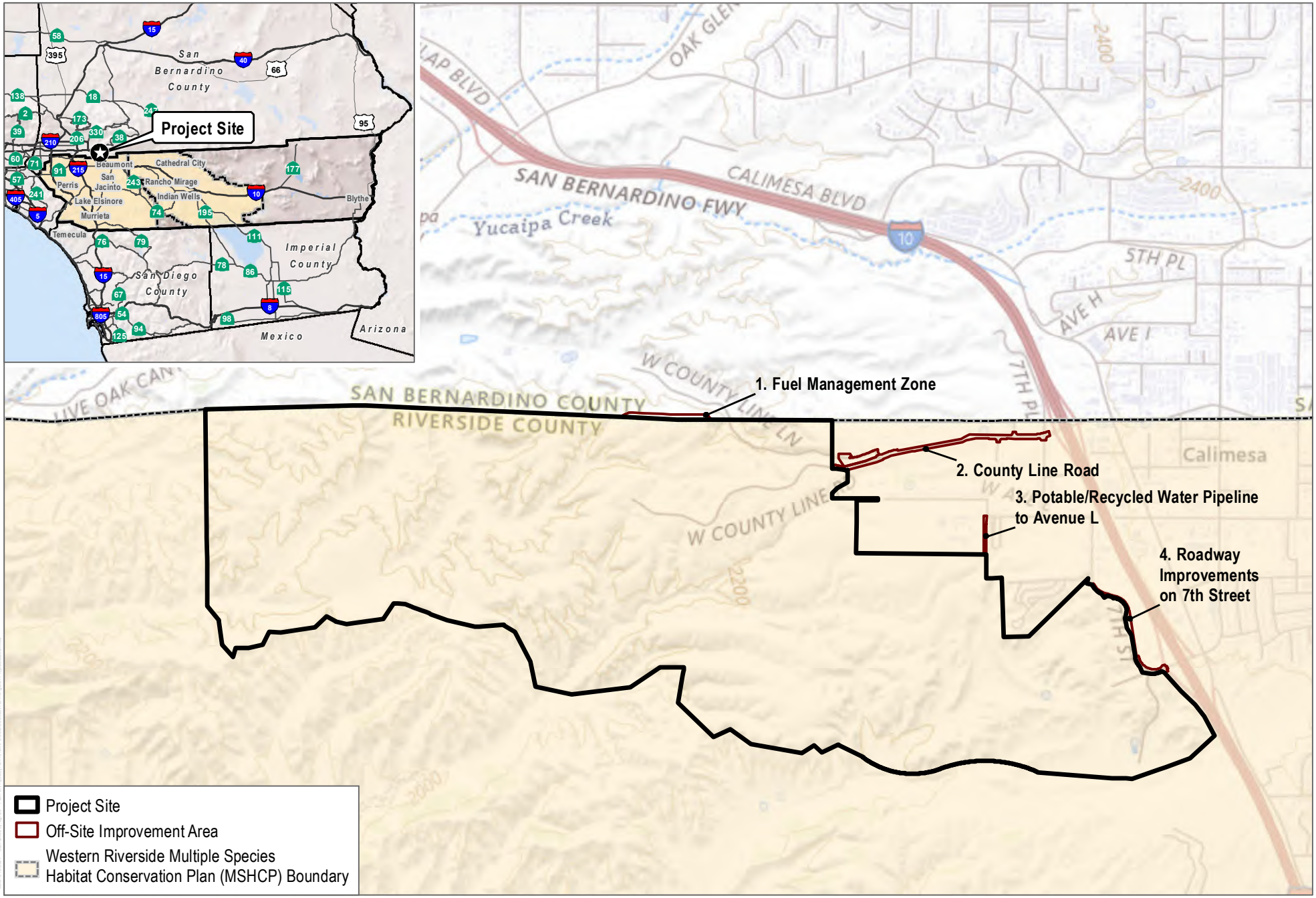
Appendix A
Figures



SOURCE: USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles; Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

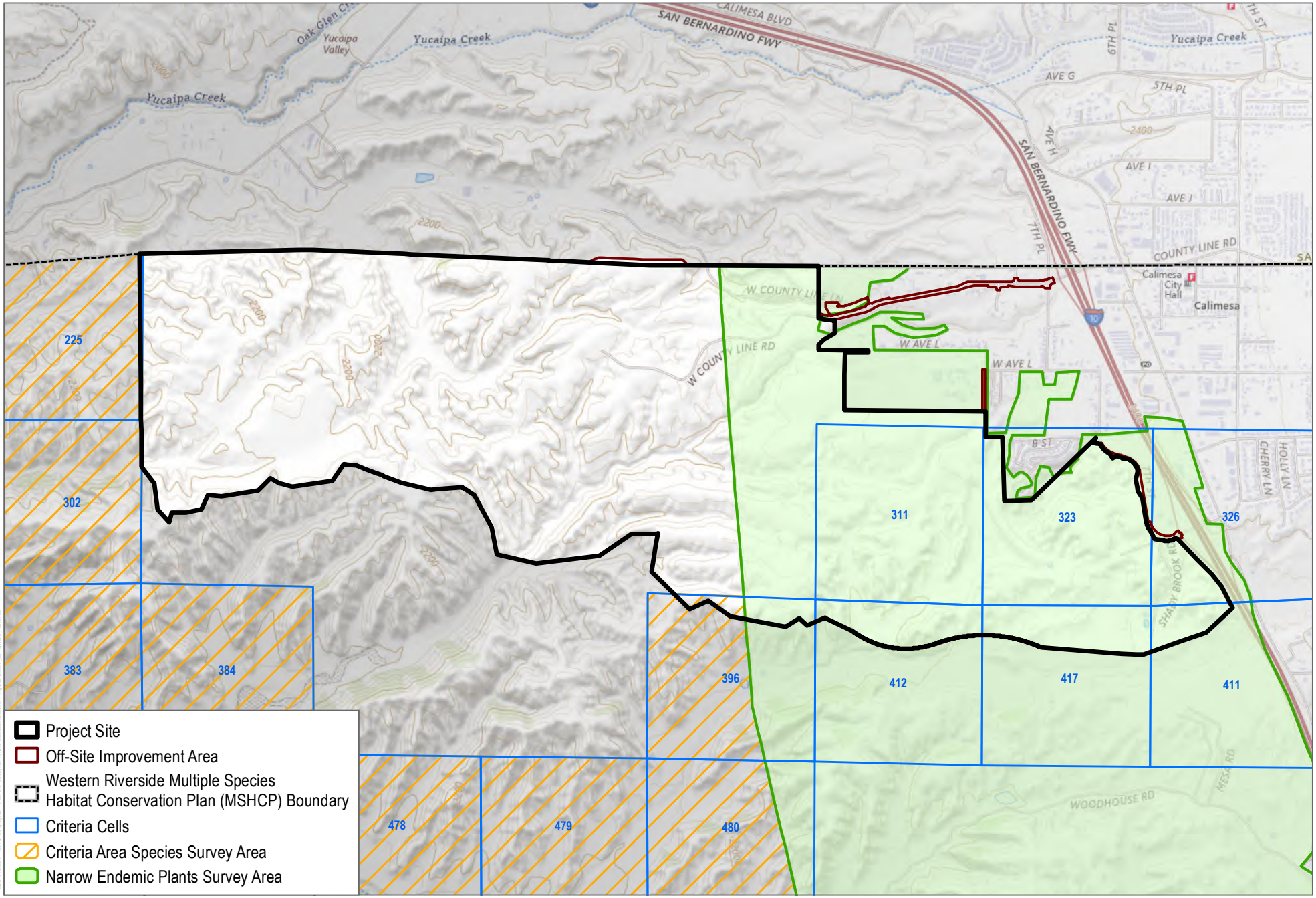
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Riverside County; USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles; Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

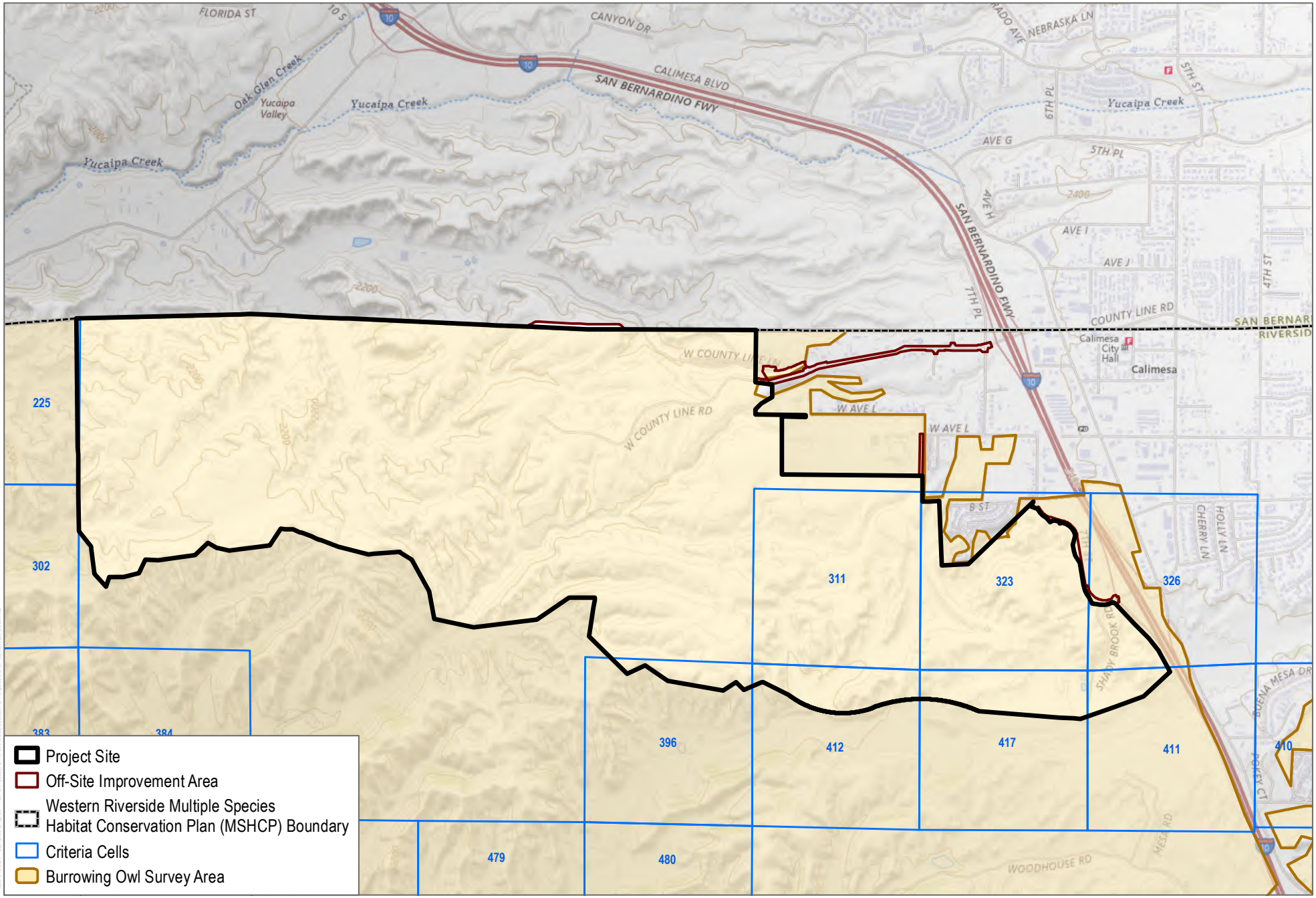
DUDEK

0 1,000 2,000 Feet

FIGURE 2

MSHCP Survey Areas - Plants

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Riverside County; USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles; Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

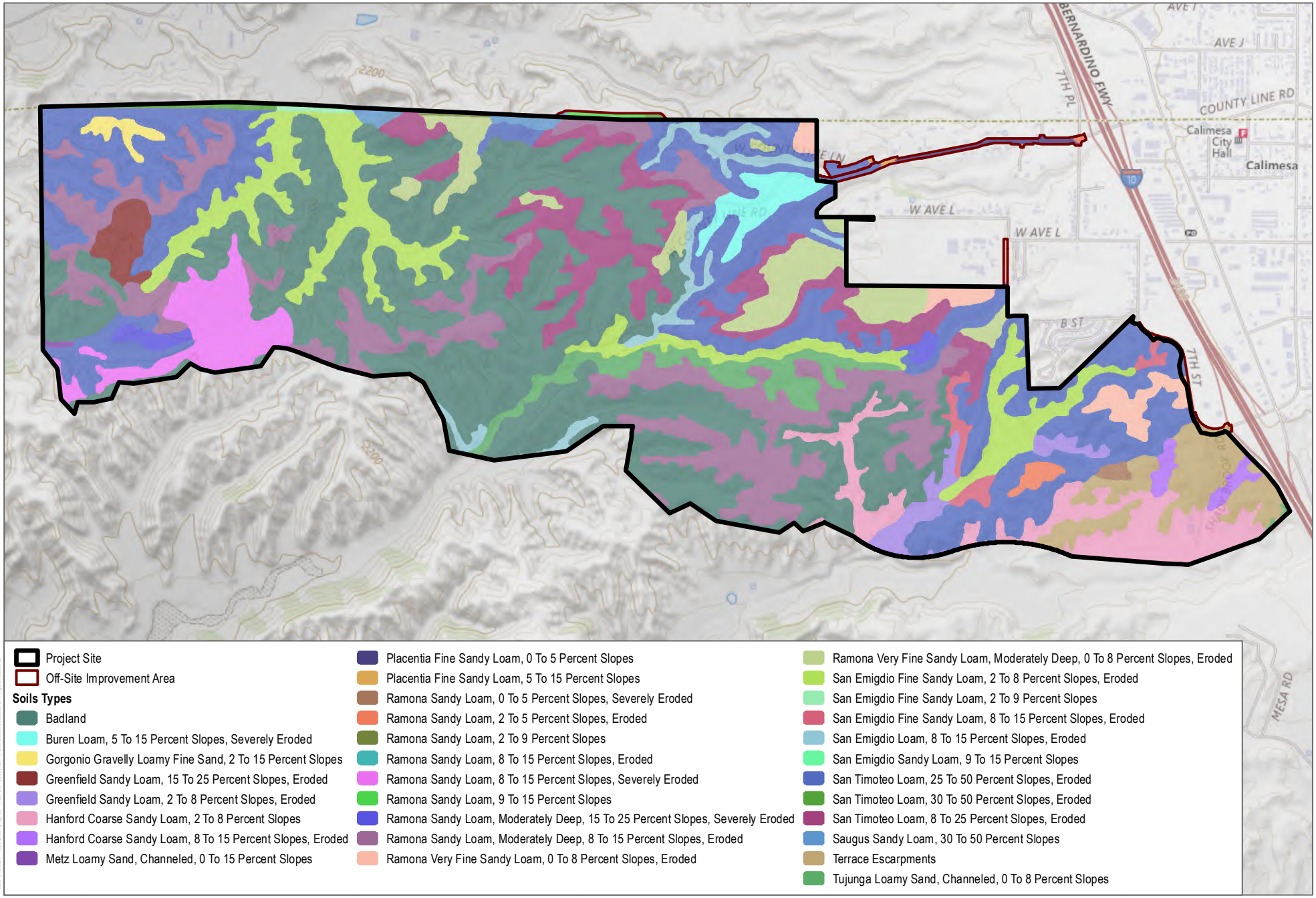
DUDEK

0 1,000 2,000 Feet

FIGURE 3

MSHCP Survey Areas - Burrowing Owl

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: USDA NRCS; Riverside County; USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles;
Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

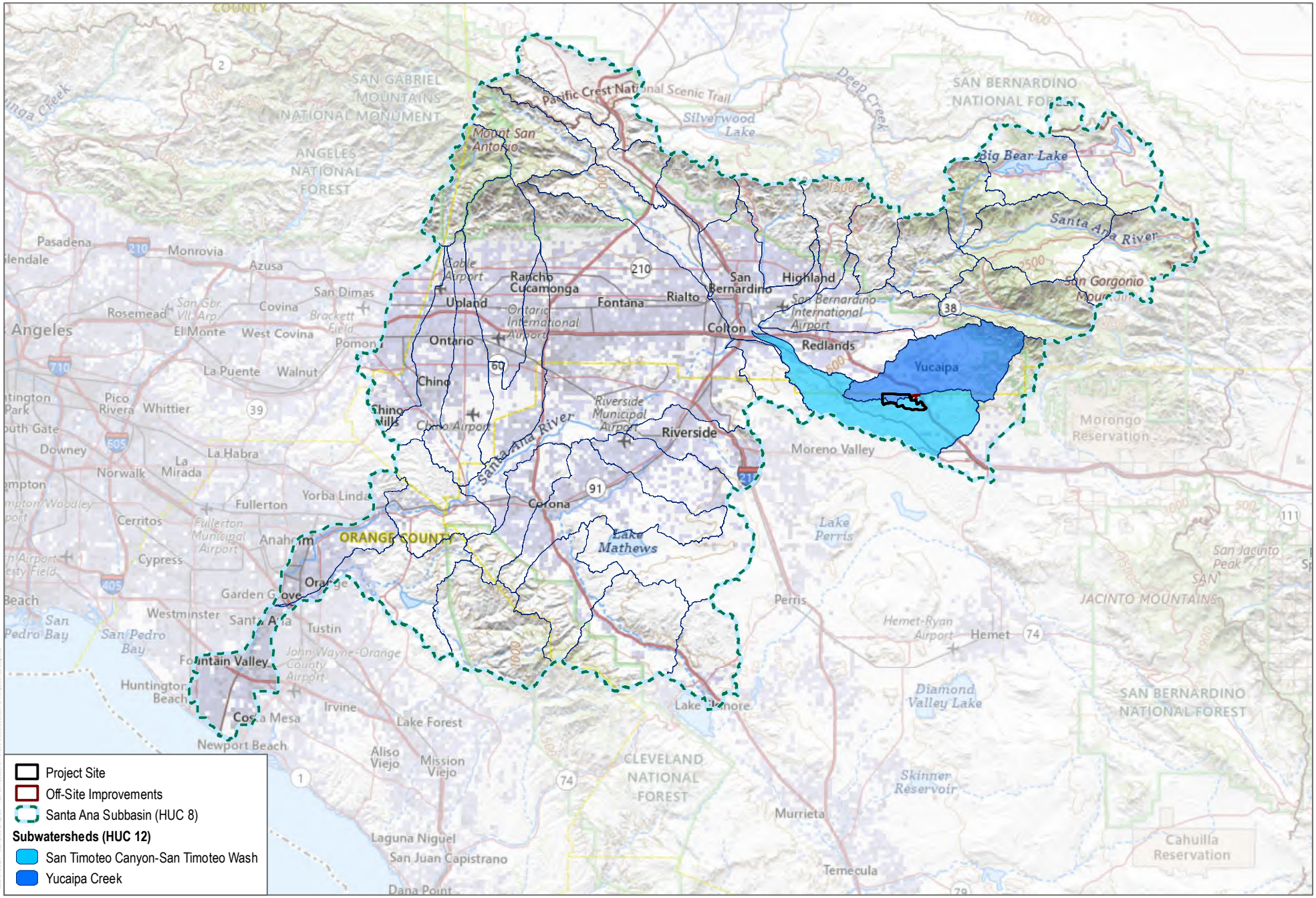
DUDEK

0 1,000 2,000 Feet

FIGURE 4

Soils

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: USGS NHD; USGS National Topo Maps

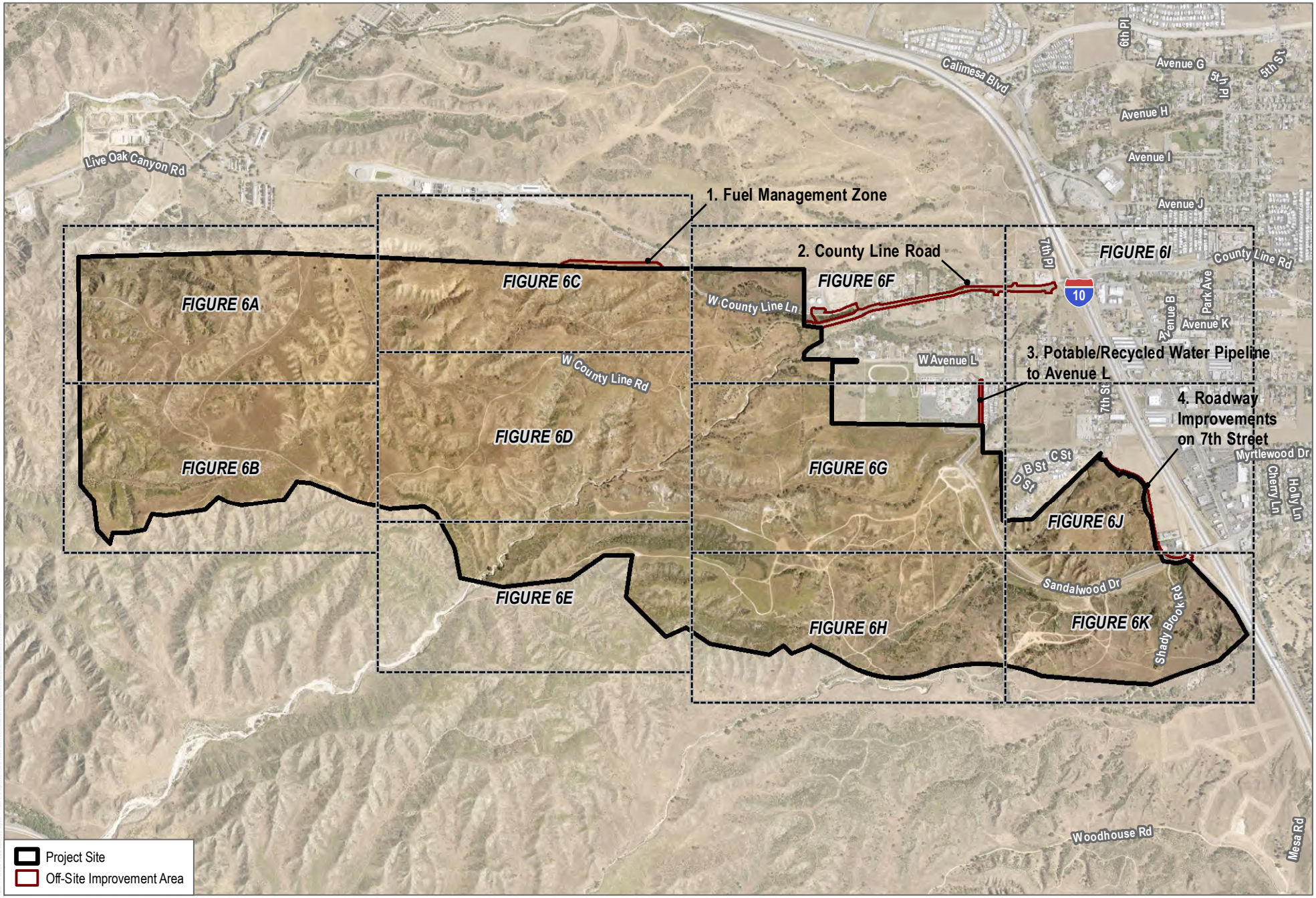
DUDEK

0 5 10 Miles

FIGURE 5

Hydrology

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

DUDEK

0 1,000 2,000 Feet

FIGURE 6

Biological Resources Overview

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Suitable Burrowing Owl Burrows
- Rare/Sensitive Vegetation Communities
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Adefas-Salmel - Chamise-Sage chaparral
  - Arcgla-Adefas-Quewis - Eastwood manzanita chaparral
  - Ceacra-Adefas-Salmel - Hoary leaf ceanothus chaparral
  - Rhuova - Sugarbush chaparral
- **Grass and Herb Dominated**
  - Corfil - Sand-aster and perennial buckwheat fields
  - Hirinc - Upland mustards or star-thistle fields
  - NNG - Non-Native Grassland
- **Scrub**
  - Artcal-Lotsco - California sagebrush-(purple sage) scrub
  - Erifas/Encfar - California buckwheat scrub
  - Kecant - Bush penstemon scrub
  - Lotsco - Deerweed-silver lupine-yerba santa scrub
  - Malfas - Bush mallow scrub
  - Salmel/Erifas/BrorubBlack sage scrub
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - DH - Disturbed Habitat

SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6A

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Suitable Burrowing Owl Burrows
- Rare/Sensitive Vegetation Communities
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Adefas-Salmel - Chamise-Sage chaparral
  - Cermon - Hairy leaf-woolly leaf ceanothus chaparral
- **Grass and Herb Dominated**
  - Corfil - Sand-aster and perennial buckwheat fields
  - NNG - Non-Native Grassland
- **Scrub**
  - Lotsco - Deerweed-silver lupine-yerba santa scrub
  - Malfas - Bush mallow scrub
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - ORN - Ornamental Plantings
  - DH - Disturbed Habitat

SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6B

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows

Special-Status Wildlife

- yellow warbler
- Rare/Sensitive Vegetation Communities

Chaparral

- Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
- Rhuova - Sugarbush chaparral

Grass and Herb Dominated

- Corfil - Sand-aster and perennial buckwheat fields
- Hirinc - Upland mustards or star-thistle fields
- NNG - Non-Native Grassland

Scrub

- Malfas - Bush mallow scrub

Woodland

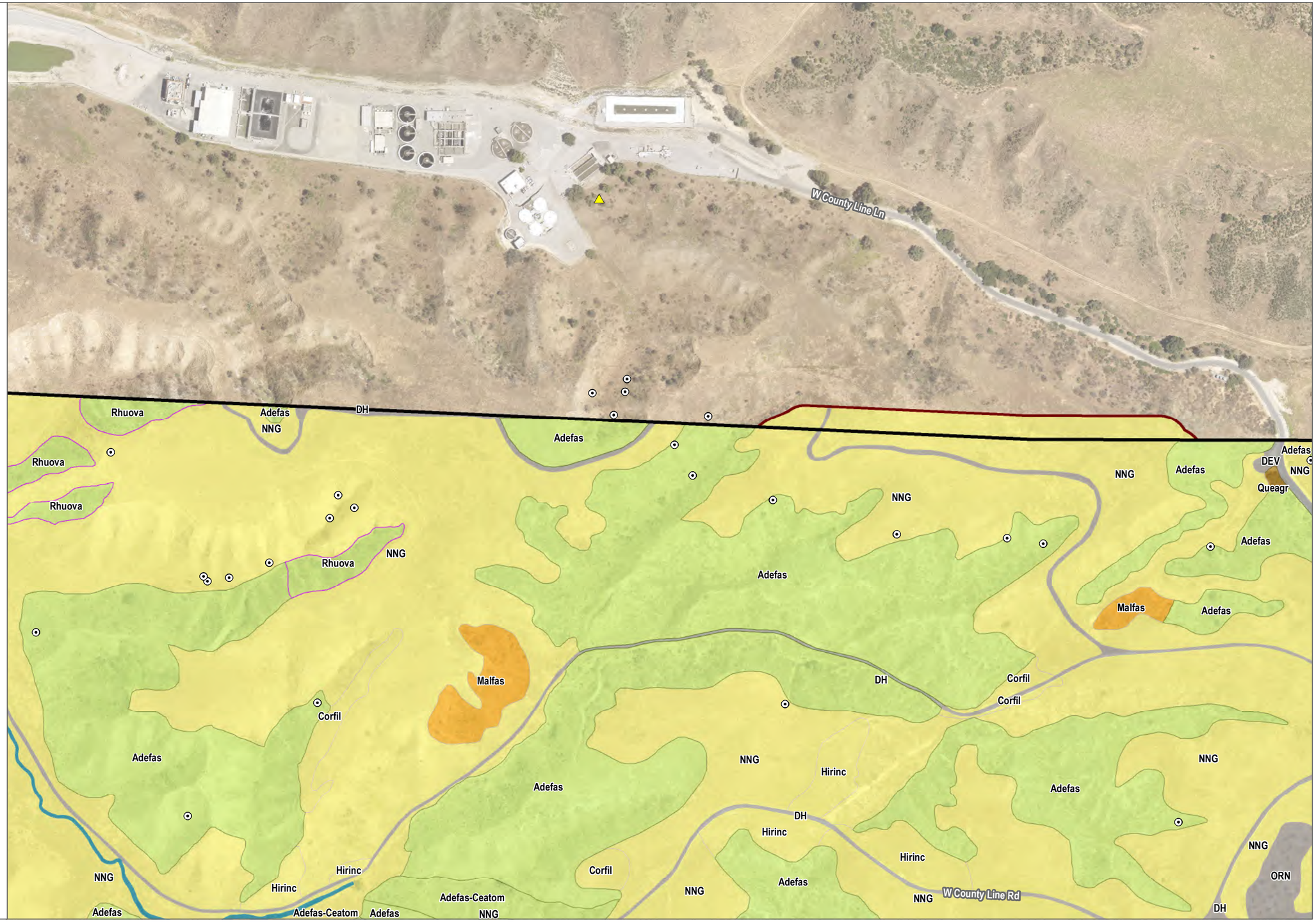
- Queagr - Coast live oak woodland and forest

Unvegetated

- NWW - Unvegetated wash and river bottom

Disturbed and Developed

- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- DEV - Urban/Developed



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

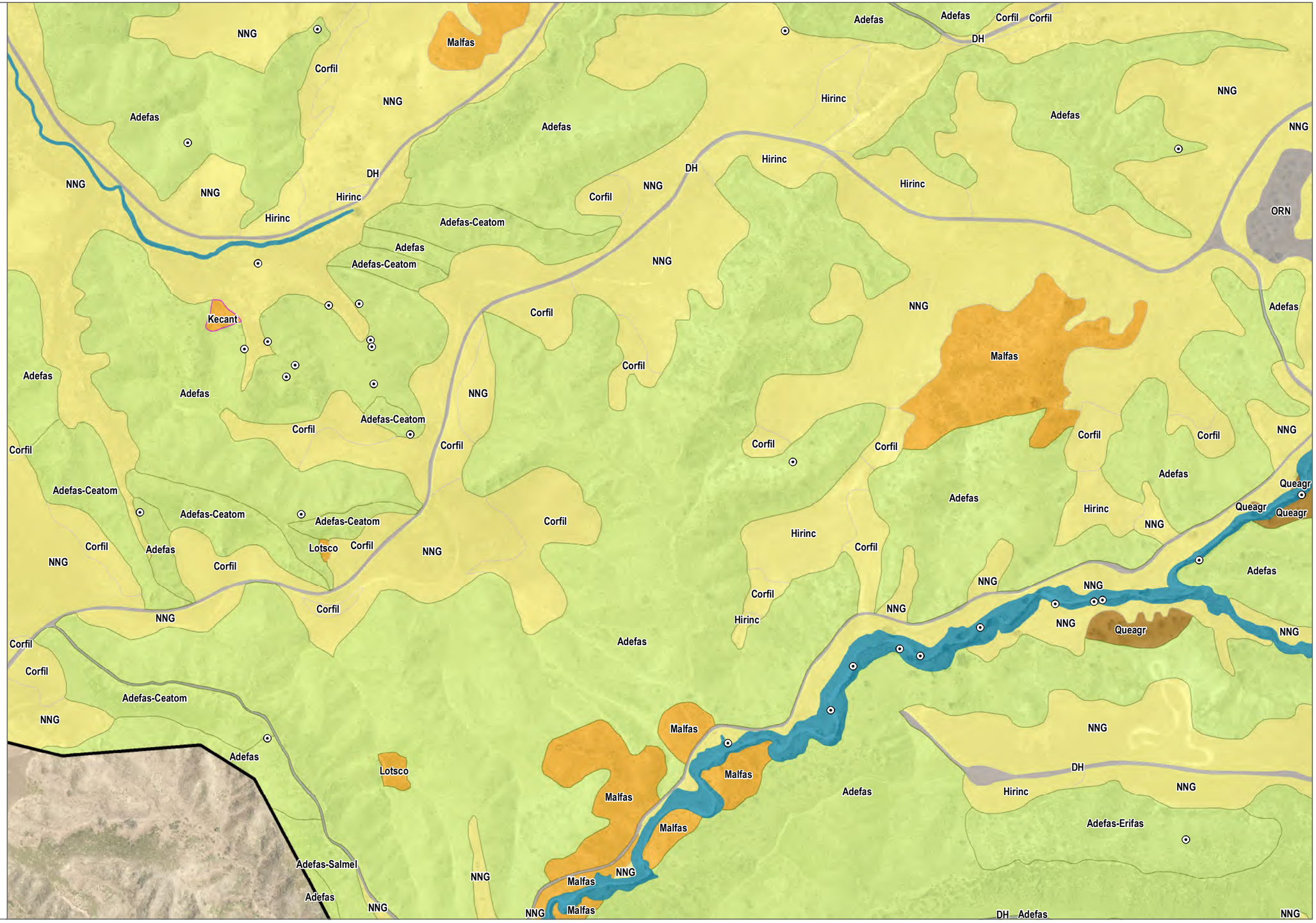
0 150 300 Feet

FIGURE 6C

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Suitable Burrowing Owl Burrows
- Rare/Sensitive Vegetation Communities
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Adefas-Salmel - Chamise-Sage chaparral
- **Grass and Herb Dominated**
  - Corfil - Sand-aster and perennial buckwheat fields
  - Hirinc - Upland mustards or star-thistle fields
  - NNG - Non-Native Grassland
- **Scrub**
  - Kecant - Bush penstemon scrub
  - Lotsco - Deerweed-silver lupine-yerba santa scrub
  - Malfas - Bush mallow scrub
- **Woodland**
  - Queagr - Coast live oak woodland and forest
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - ORN - Ornamental Plantings
  - DH - Disturbed Habitat



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

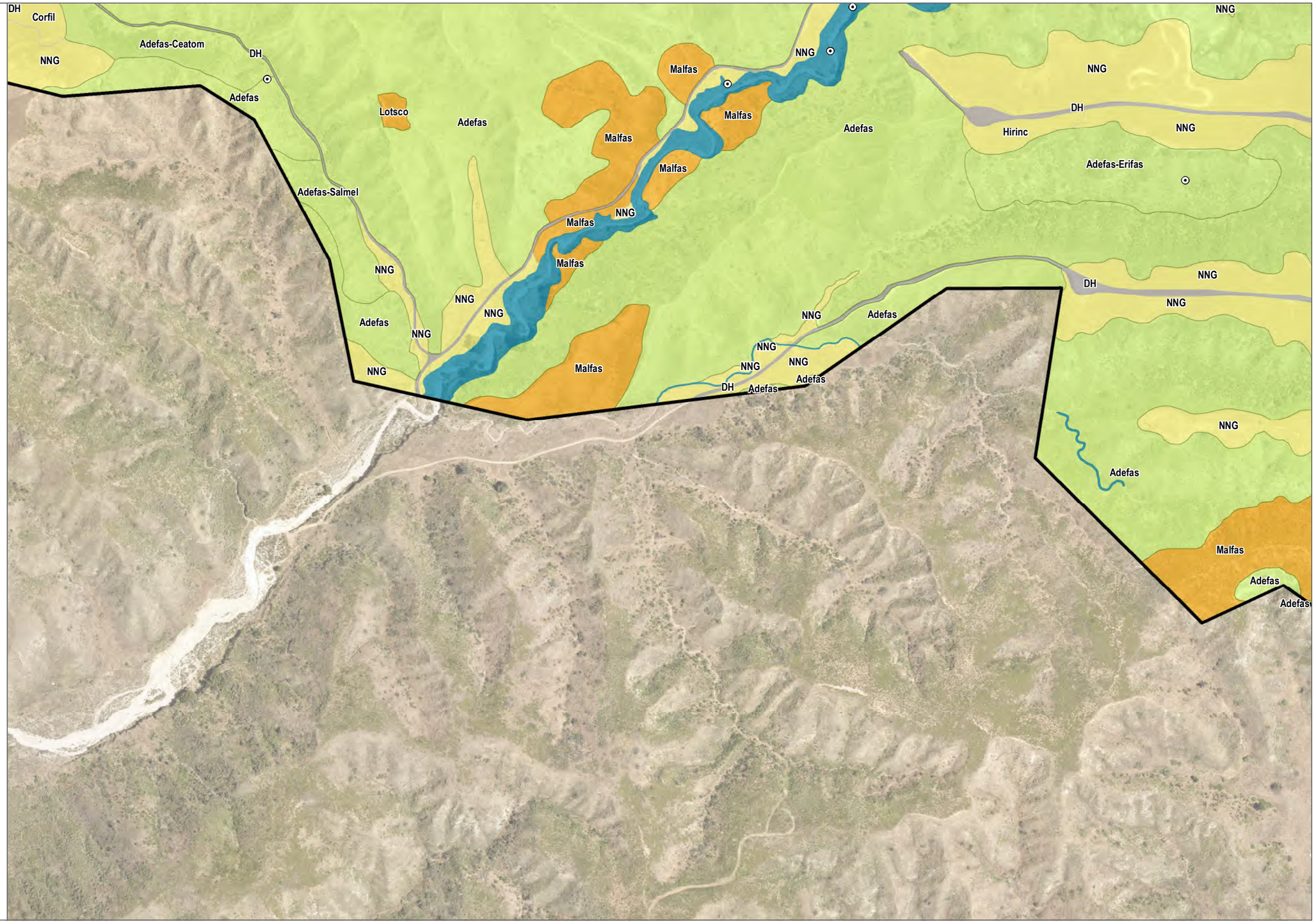
0 150 300 Feet

FIGURE 6D

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Suitable Burrowing Owl Burrows
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Adefas-Salmel - Chamise-Sage chaparral
- **Grass and Herb Dominated**
  - Corfil - Sand-aster and perennial buckwheat fields
  - Hirinc - Upland mustards or star-thistle fields
  - NNG - Non-Native Grassland
- **Scrub**
  - Lotsco - Deerweed-silver lupine-yerba santa scrub
  - Malfas - Bush mallow scrub
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - DH - Disturbed Habitat



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6E

Biological Resources

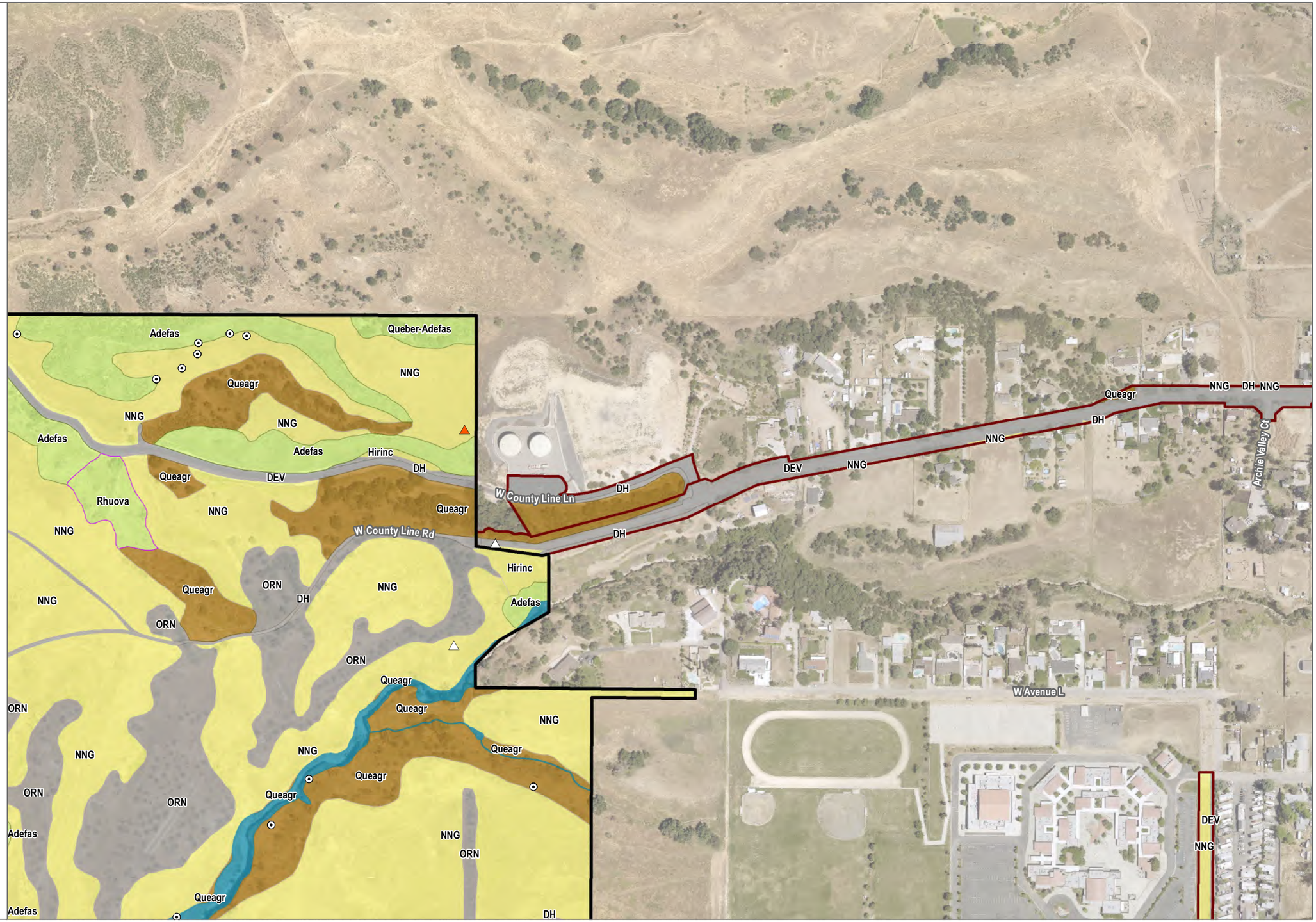
Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows

Special-Status Wildlife

- red diamond rattlesnake
- white-tailed kite

- Rare/Sensitive Vegetation Communities
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Queber-Adefas - Scrub oak chaparral
  - Rhuova - Sugarbush chaparral
- **Grass and Herb Dominated**
  - Hirinc - Upland mustards or star-thistle fields
  - NNG - Non-Native Grassland
- **Woodland**
  - Queagr - Coast live oak woodland and forest
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - ORN - Ornamental Plantings
  - DH - Disturbed Habitat
  - DEV - Urban/Developed



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6F

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows

Special-Status Wildlife

- northern harrier
- Rare/Sensitive Vegetation Communities

Chaparral

- Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
- Adefas-Salmel - Chamise-Sage chaparral
- Queber-Adefas - Scrub oak chaparral
- Rhuova - Sugarbush chaparral

Grass and Herb Dominated

- Hirinc - Upland mustards or star-thistle fields
- NNG - Non-Native Grassland
- Naspul-Ave-Bro - Needle grass-Melic grass grassland

Scrub

- Encfar - Brittle bush scrub
- Erifas/Encfar - California buckwheat scrub

Woodland

- Queagr - Coast live oak woodland and forest

Riparian

- Sallas - Arroyo willow thickets

Unvegetated

- NWW - Unvegetated wash and river bottom

Disturbed and Developed

- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- DEV - Urban/Developed

SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6G

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Suitable Burrowing Owl Burrows

Special-Status Wildlife

- northern harrier
- Rare/Sensitive Vegetation Communities

Chaparral

- Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
- Adefas-Salmel - Chamise-Sage chaparral
- Queber-Adefas - Scrub oak chaparral
- Rhuova - Sugarbush chaparral

Grass and Herb Dominated

- NNG - Non-Native Grassland
- Sal - Russianthistle-dyers woad-fivehood bassia fields

Scrub

- Encfar - Brittle bush scrub
- Erifas/Encfar - California buckwheat scrub
- Malfas - Bush mallow scrub

Woodland

- Queagr - Coast live oak woodland and forest

Riparian

- Samnig - Basket bush-river hawthorn-desert olive patches

Unvegetated

- NWW - Unvegetated wash and river bottom

Disturbed and Developed

- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- DEV - Urban/Developed

SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6H

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows
- **Grass and Herb Dominated**
  - NNG - Non-Native Grassland
- **Disturbed and Developed**
  - DH - Disturbed Habitat
  - DEV - Urban/Developed

SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

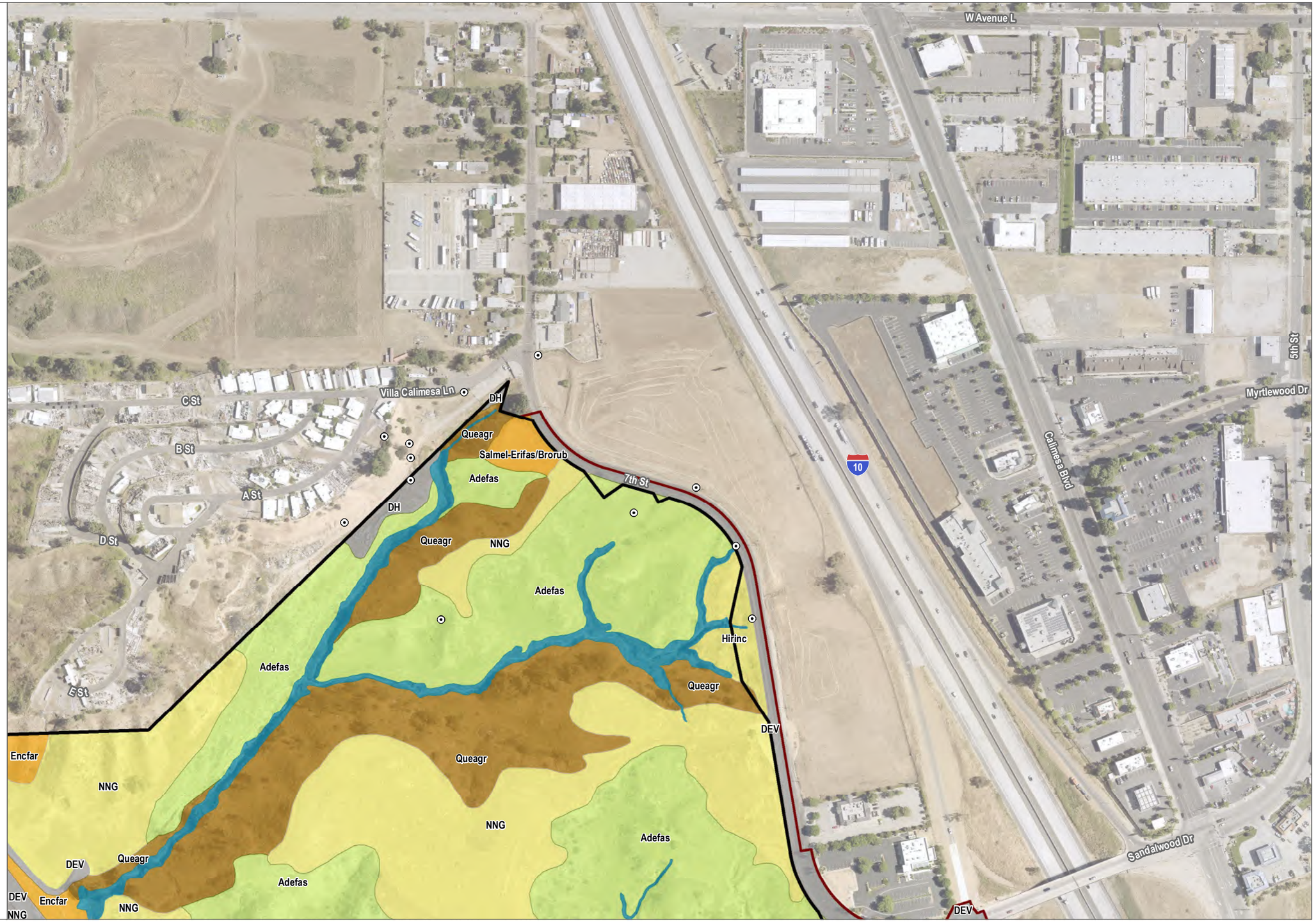
0 150 300 Feet

FIGURE 6I

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows
- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
- **Grass and Herb Dominated**
  - Hirinc - Upland mustards or star-thistle fields
  - NNG - Non-Native Grassland
- **Scrub**
  - Encfar - Brittle bush scrub
  - Salmel/Erifas/BrorubBlack sage scrub
- **Woodland**
  - Queagr - Coast live oak woodland and forest
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - DH - Disturbed Habitat
  - DEV - Urban/Developed



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 150 300 Feet

FIGURE 6J

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area
- Suitable Burrowing Owl Burrows

Special-Status Wildlife

- red diamond rattlesnake

- **Chaparral**
  - Adefas/Ceatom/Erifas/Lotsco/Eri - Chamise chaparral
  - Queber-Adefas - Scrub oak chaparral
- **Grass and Herb Dominated**
  - NNG - Non-Native Grassland
- **Scrub**
  - Encfar - Brittle bush scrub
  - Erifas/Encfar - California buckwheat scrub
- **Woodland**
  - Queagr - Coast live oak woodland and forest
- **Unvegetated**
  - NWW - Unvegetated wash and river bottom
- **Disturbed and Developed**
  - ORN - Ornamental Plantings
  - DH - Disturbed Habitat
  - DEV - Urban/Developed

SOURCE: Hunsaker 2024; Riverside County; NAIP

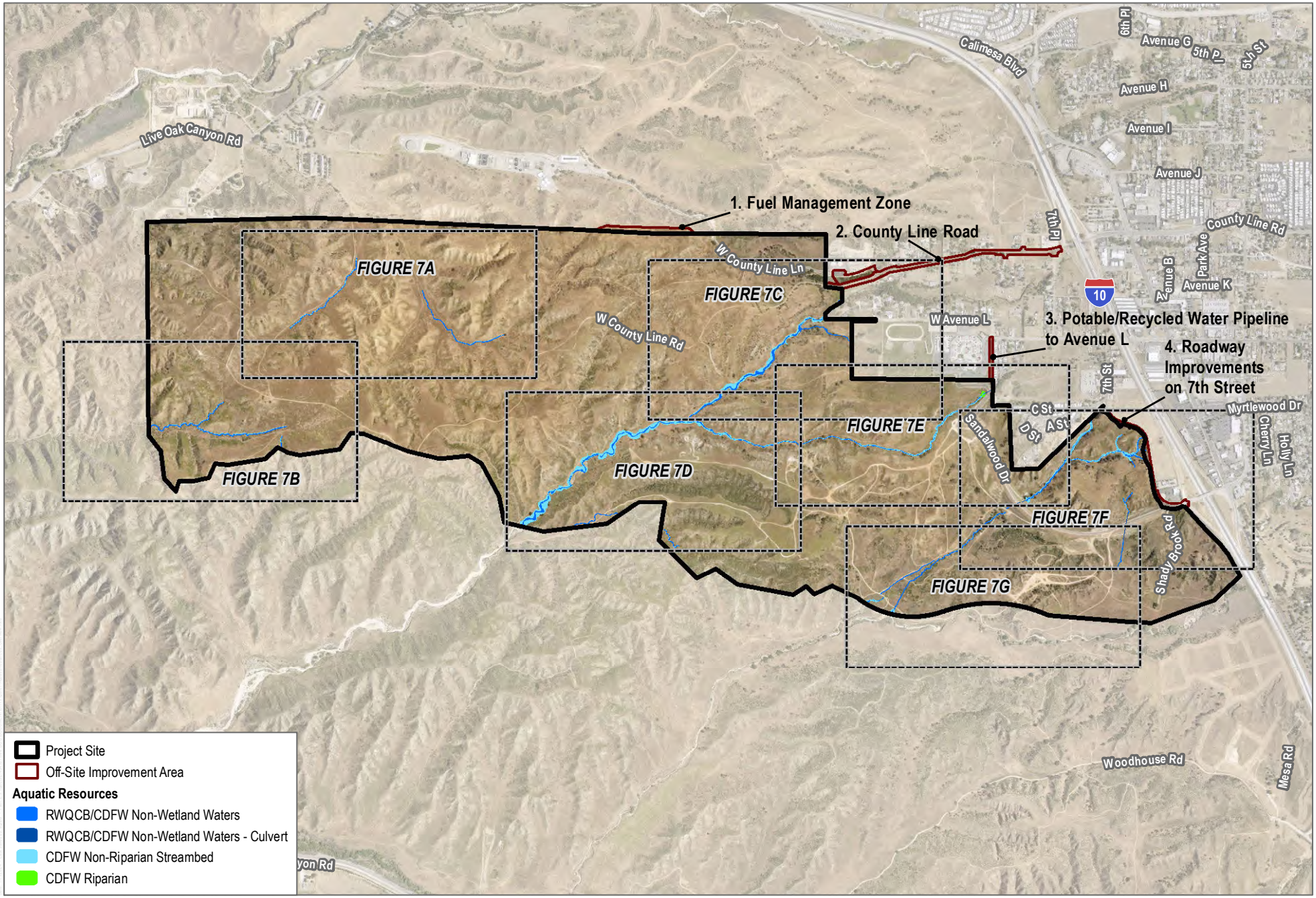
DUDEK

0 150 300 Feet

FIGURE 6K

Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

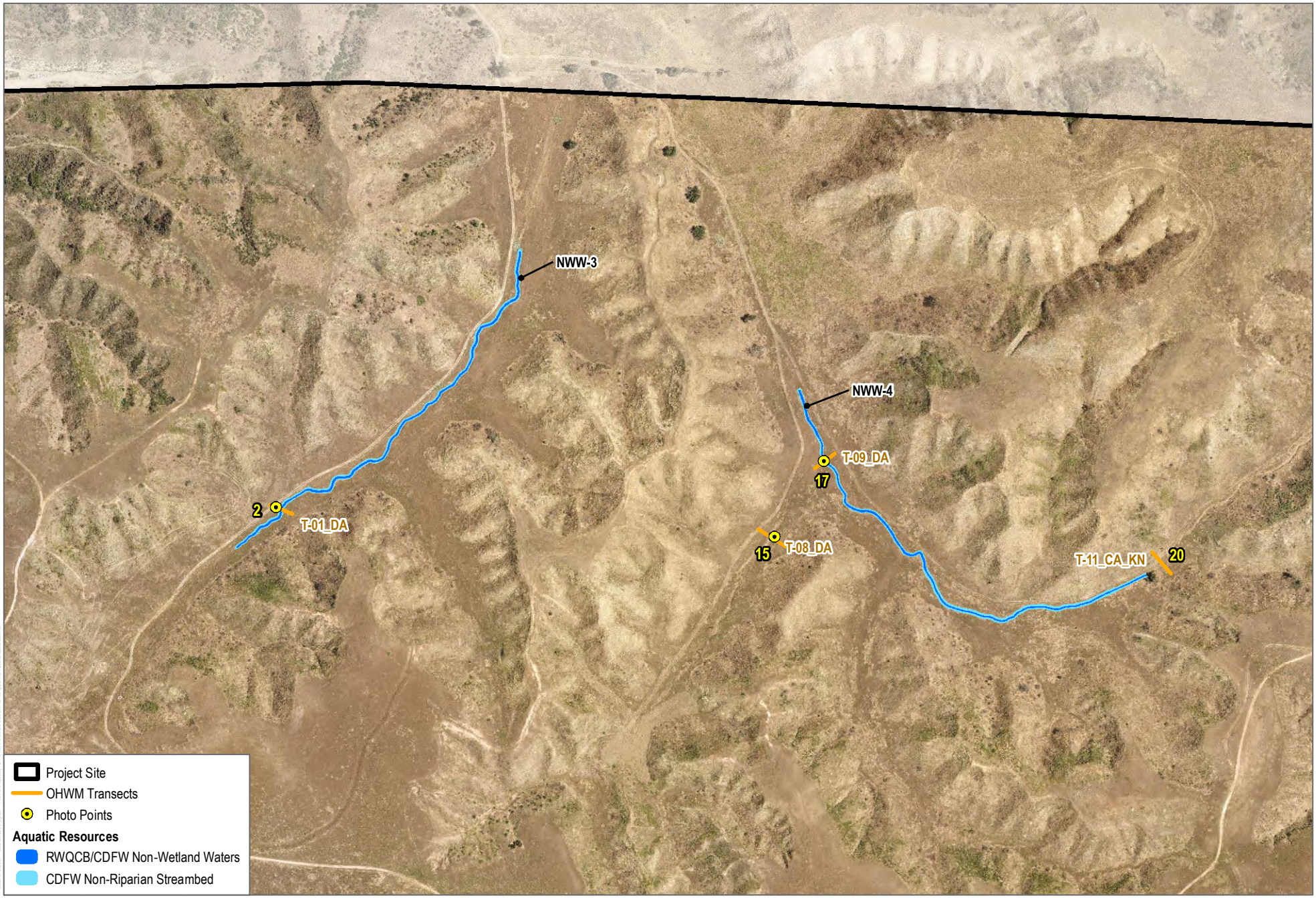
DUDEK

0 1,000 2,000 Feet

FIGURE 7

Jurisdictional Aquatic Resources Overview

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

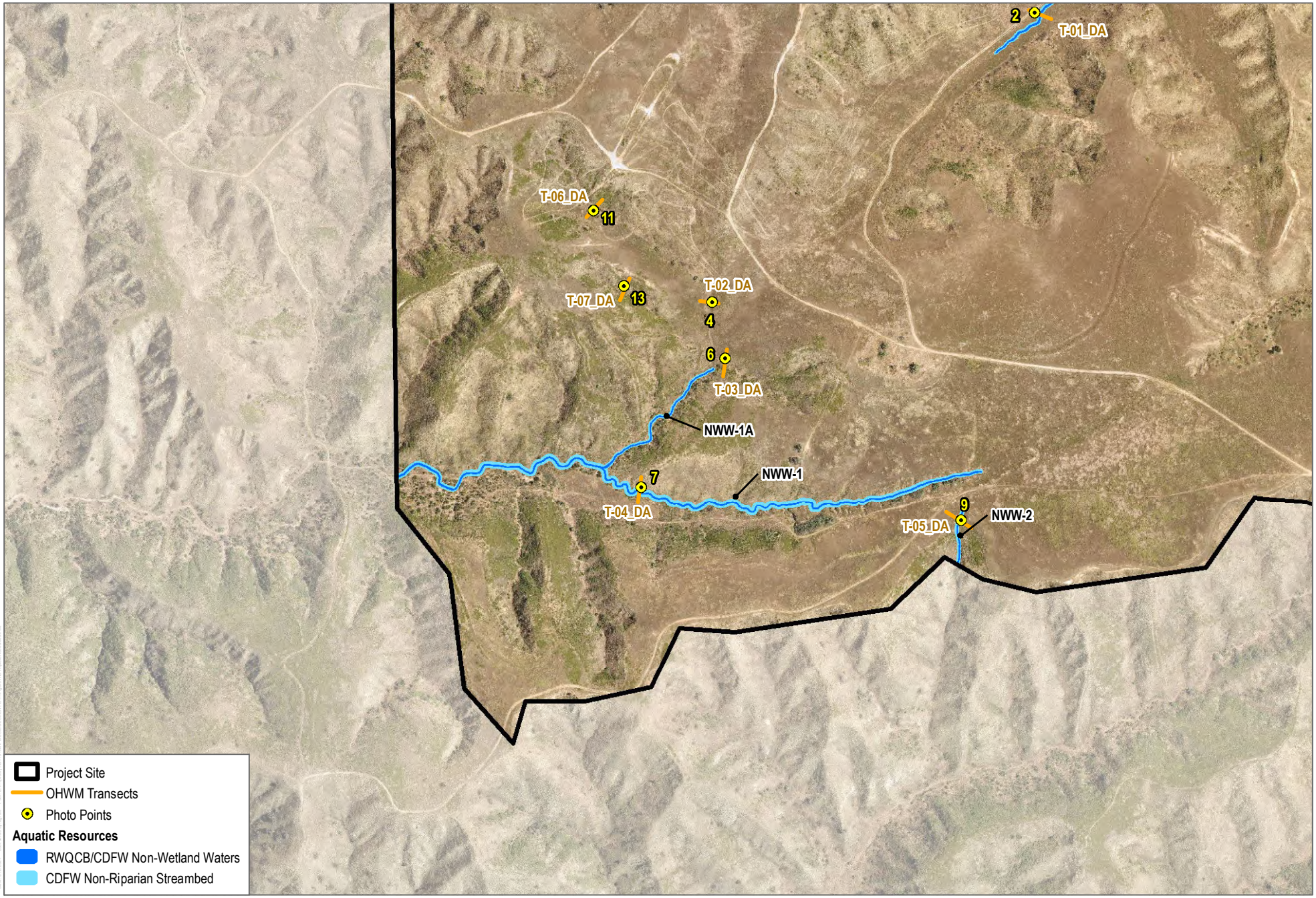
DUDEK

0 250 500 Feet

FIGURE 7A

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

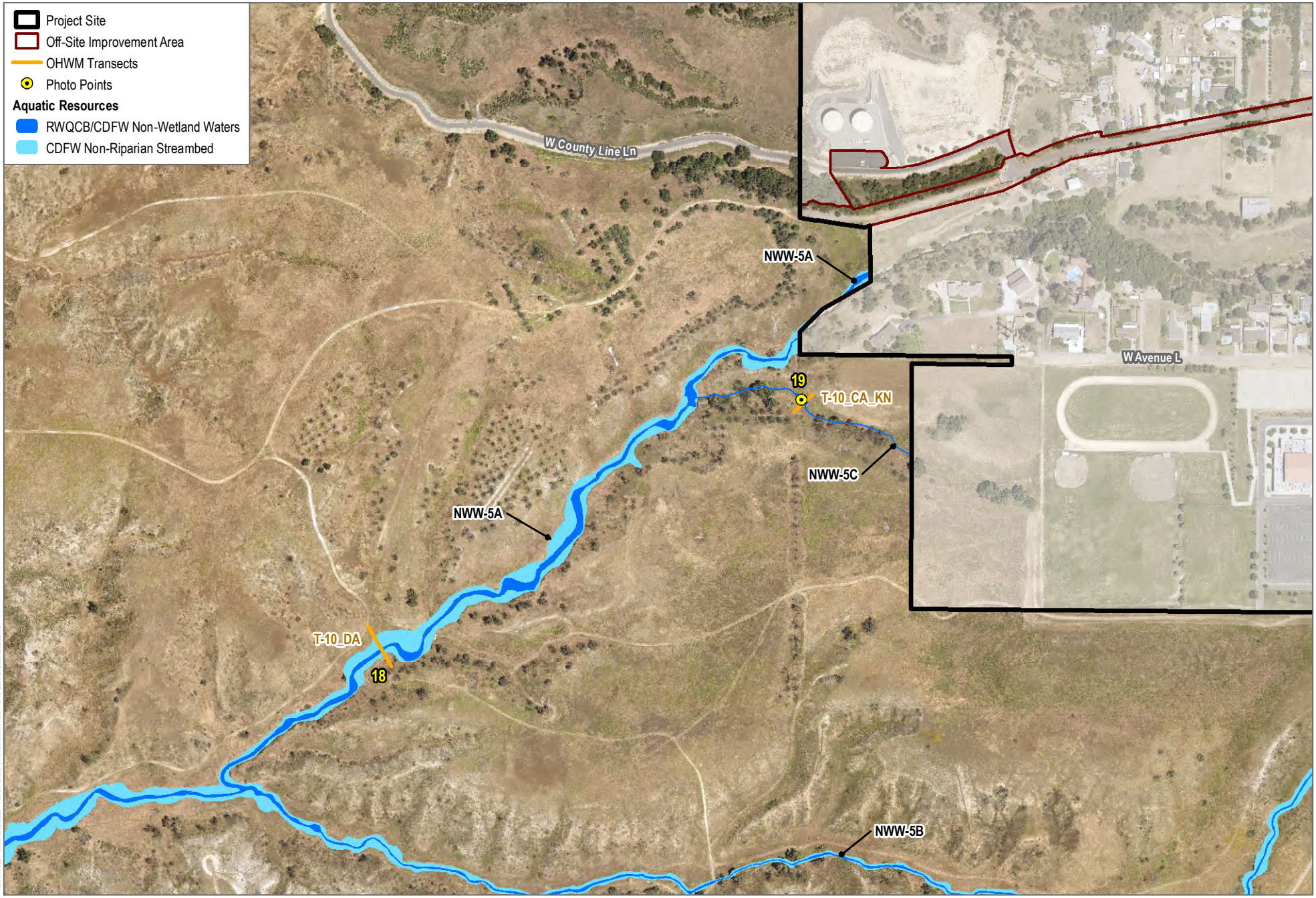
DUDEK

0 250 500 Feet

FIGURE 7B

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

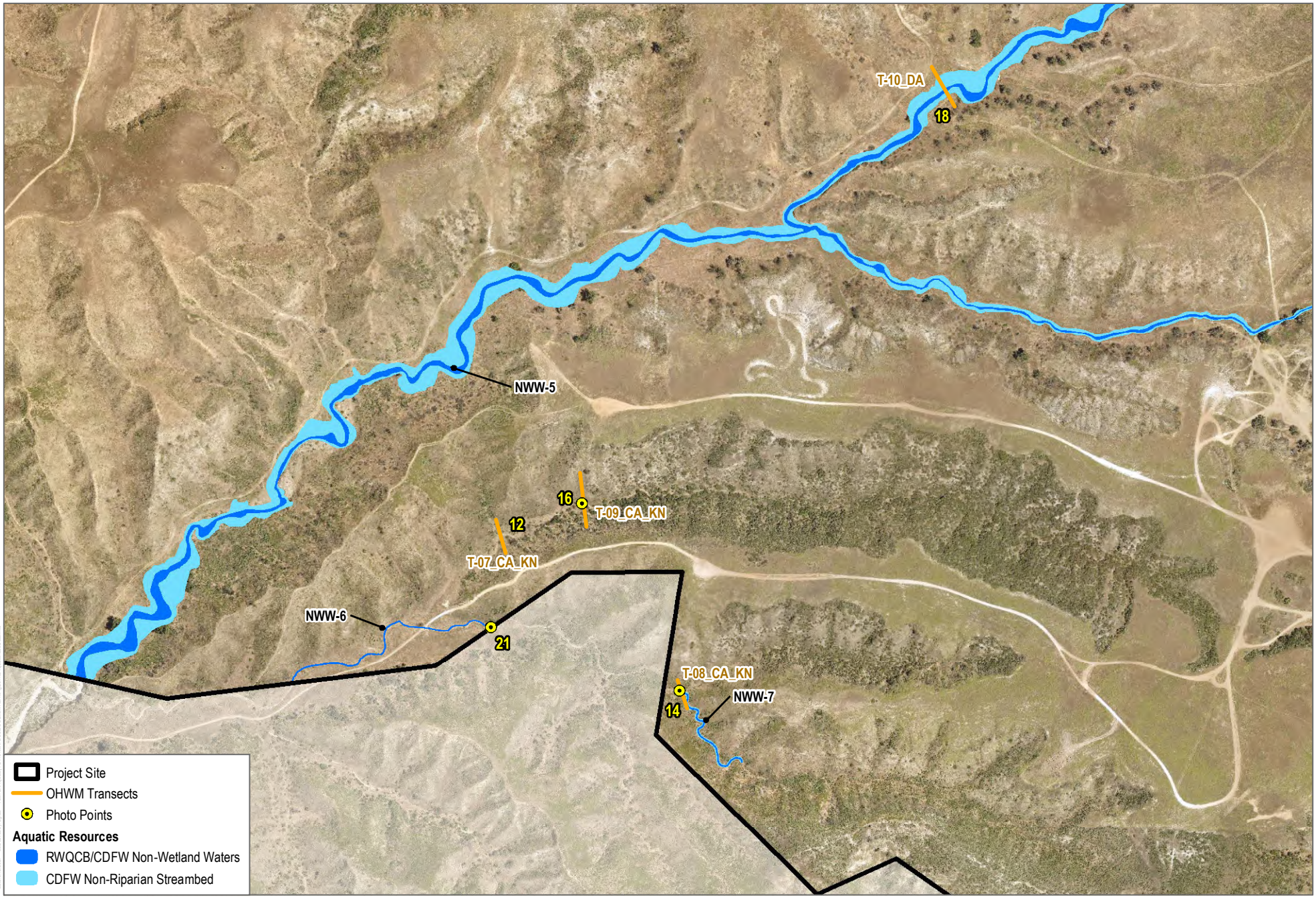
DUDEK

0 250 500 Feet

FIGURE 7C

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

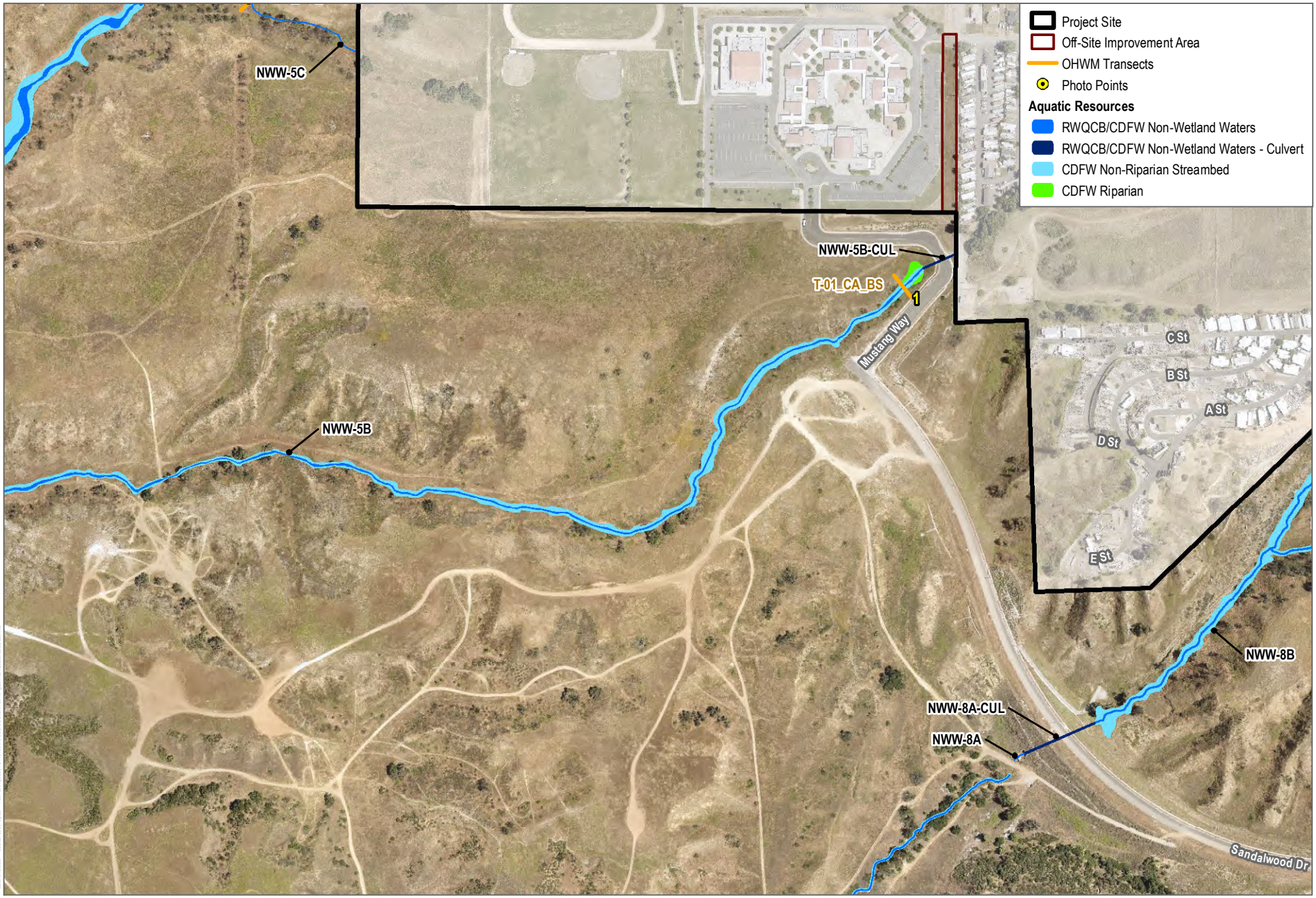
DUDEK

0 250 500 Feet

FIGURE 7D

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

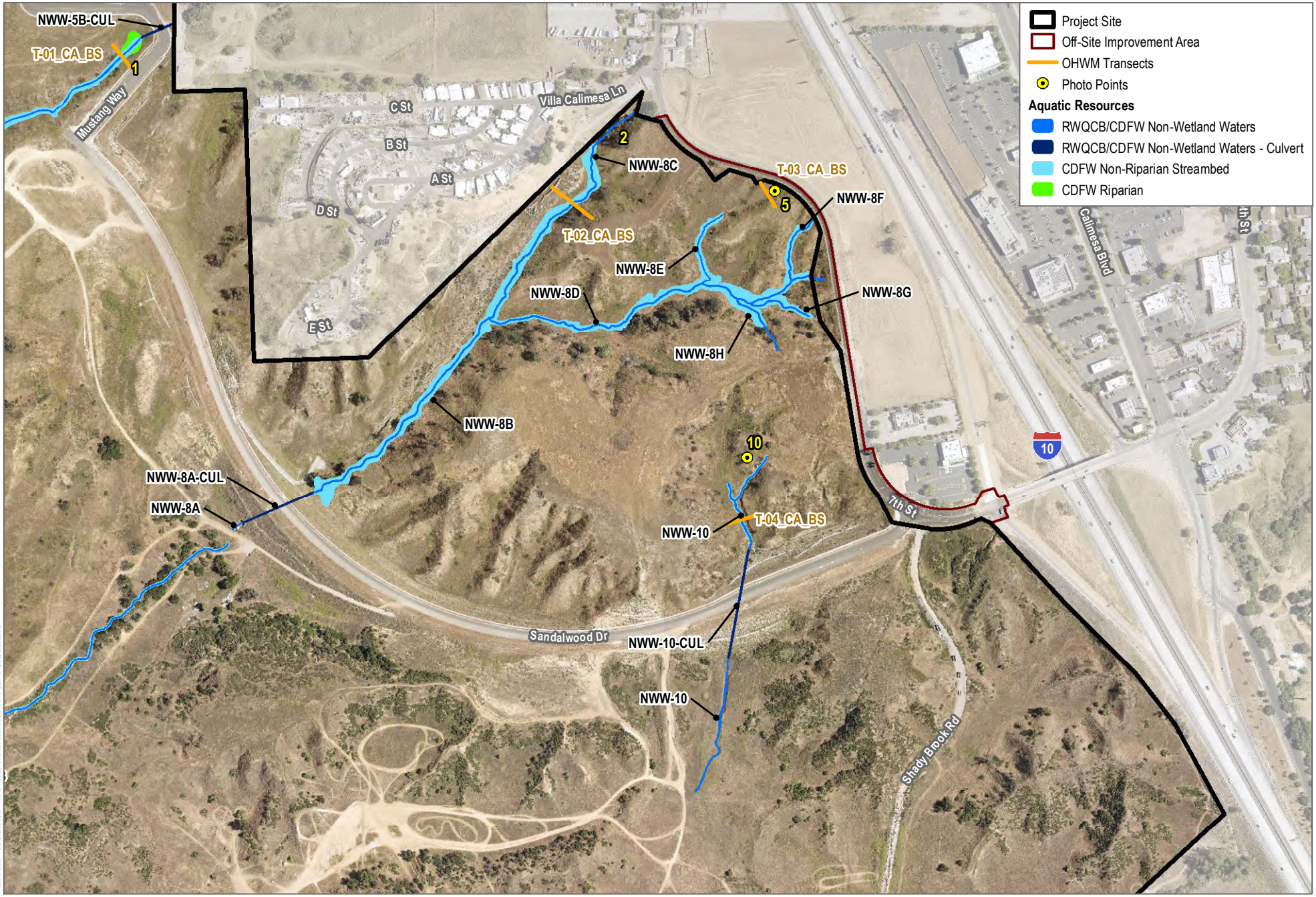
DUDEK

0 250 500 Feet

FIGURE 7E

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

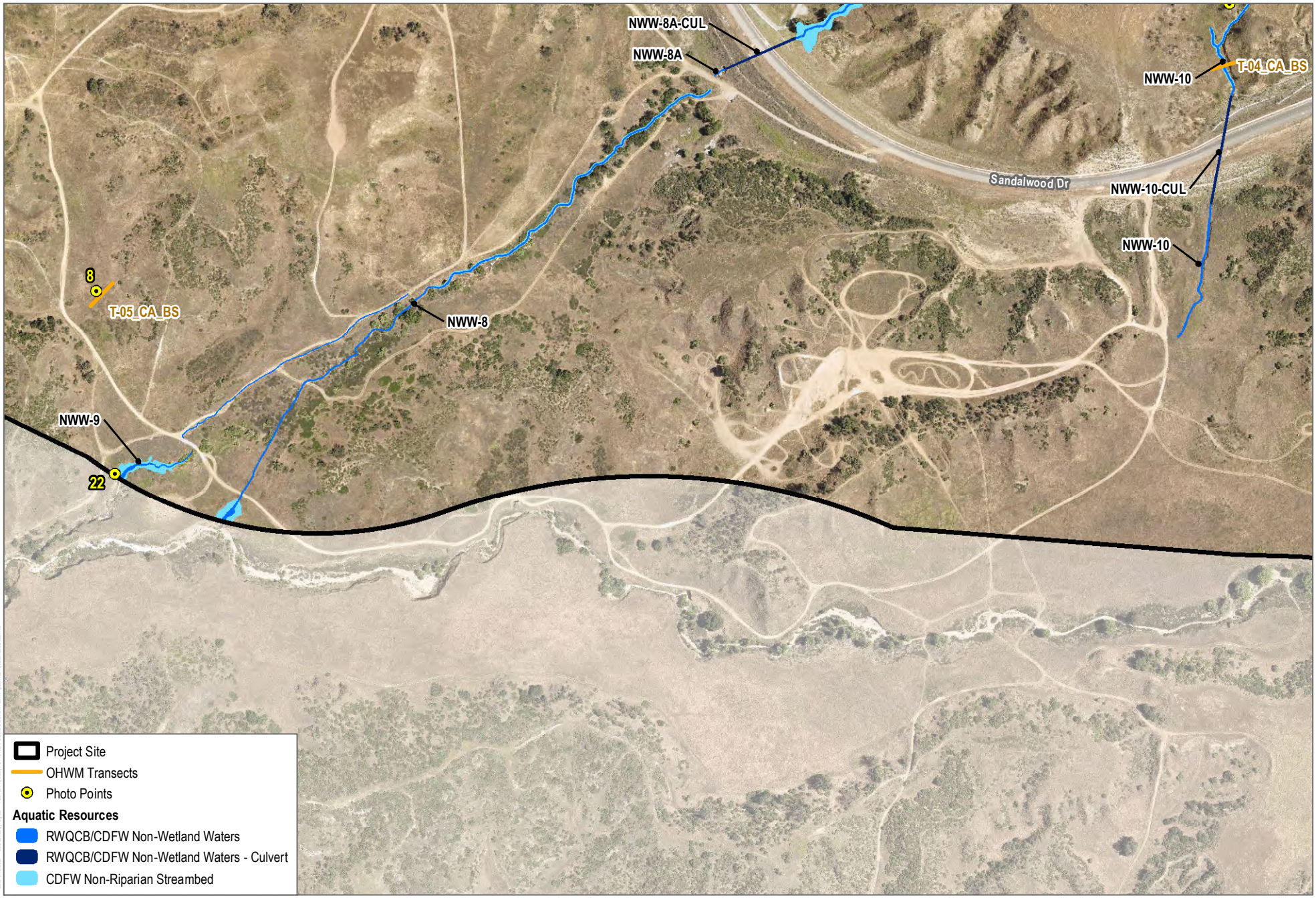
DUDEK

0 250 500 Feet

FIGURE 7F

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Husaker 2024; Riverside County; Open Street Map

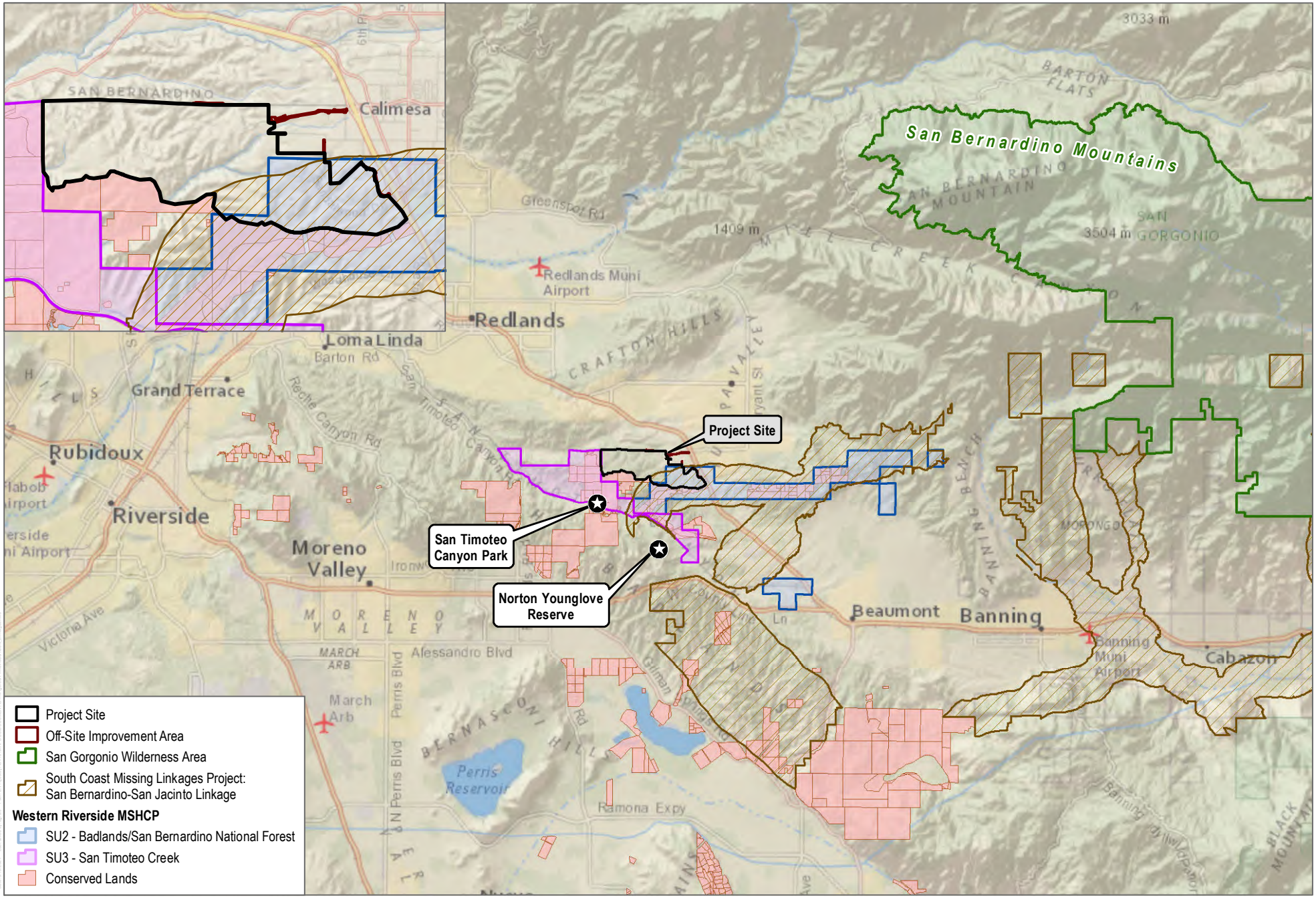
DUDEK

0 250 500 Feet

FIGURE 7G

Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Riverside County; San Bernardino County; USGS; USFS; CDFW; National Geographic Basemap

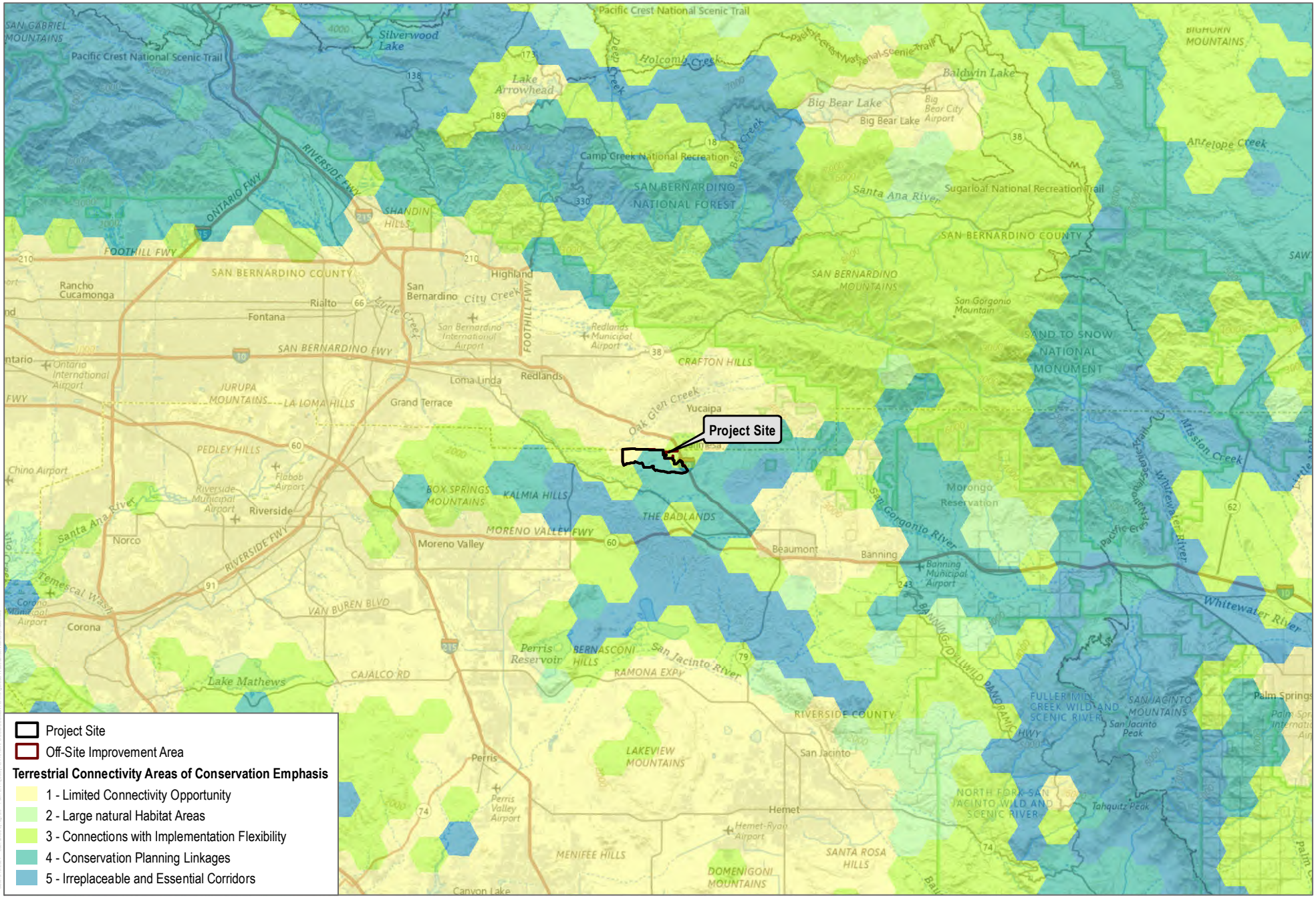
DUDEK

0 2.5 5 Miles

FIGURE 8A

Wildlife Corridors and Linkages

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



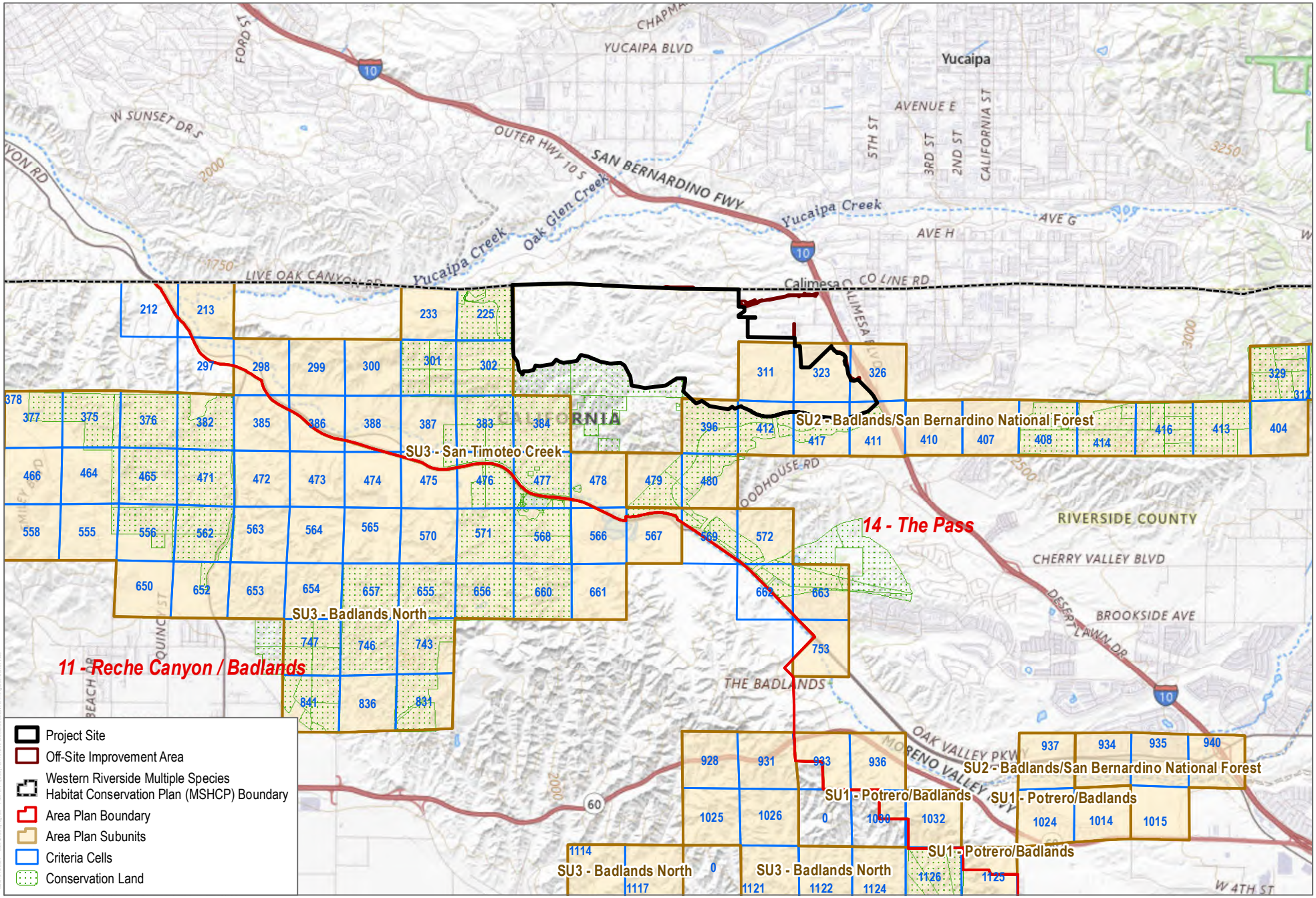
SOURCE: Riverside County; San Bernardino County; CDFW; National Geographic Basemap

FIGURE 8B

Terrestrial Connectivity Areas of Conservation Emphasis

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

DUDEK



SOURCE: Riverside County; USGS National Map

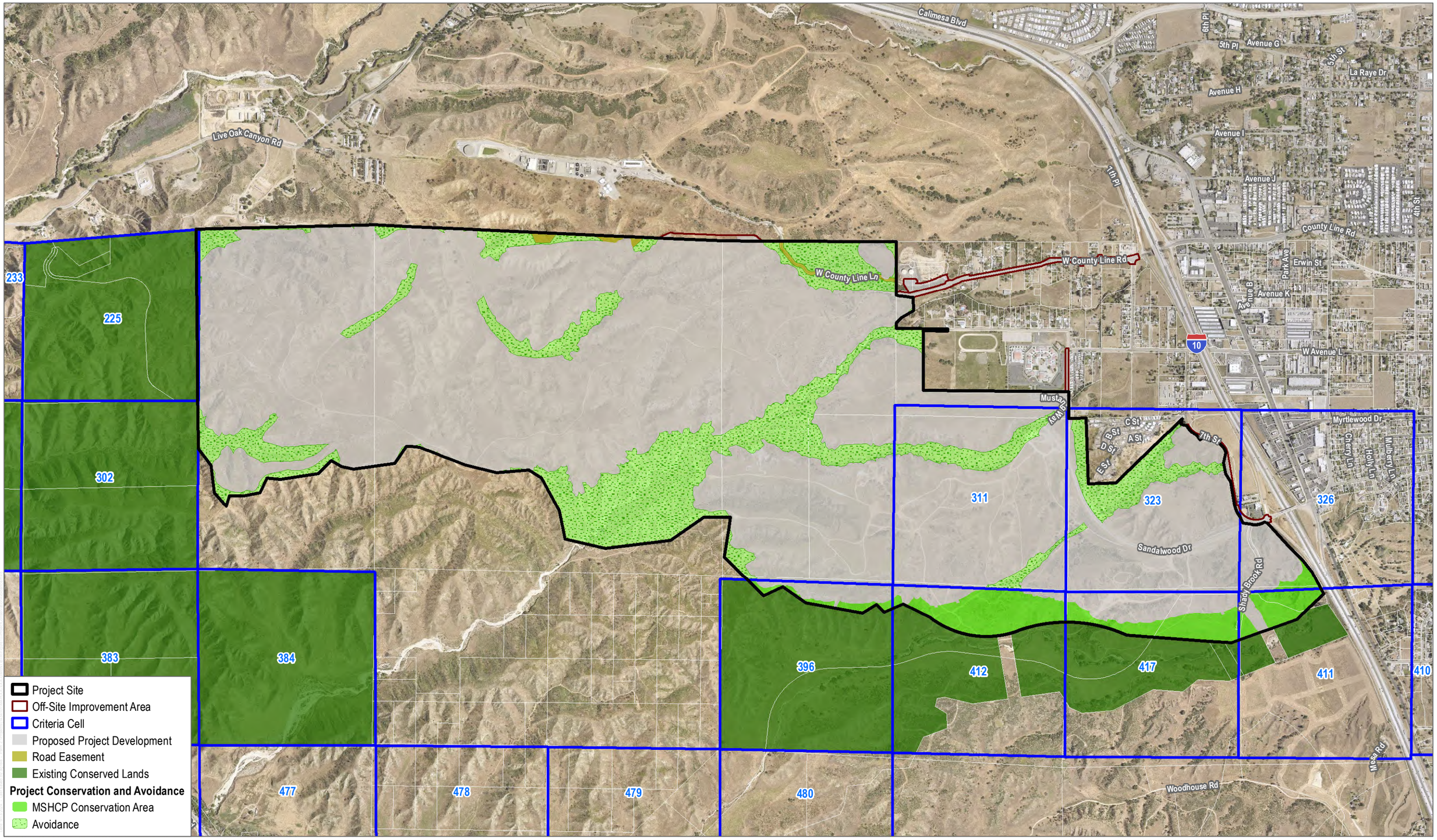
DUDEK

0 1 2 Miles

FIGURE 9

MSHCP

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Western Riverside County Regional Conservation Authority 2024; County of Riverside

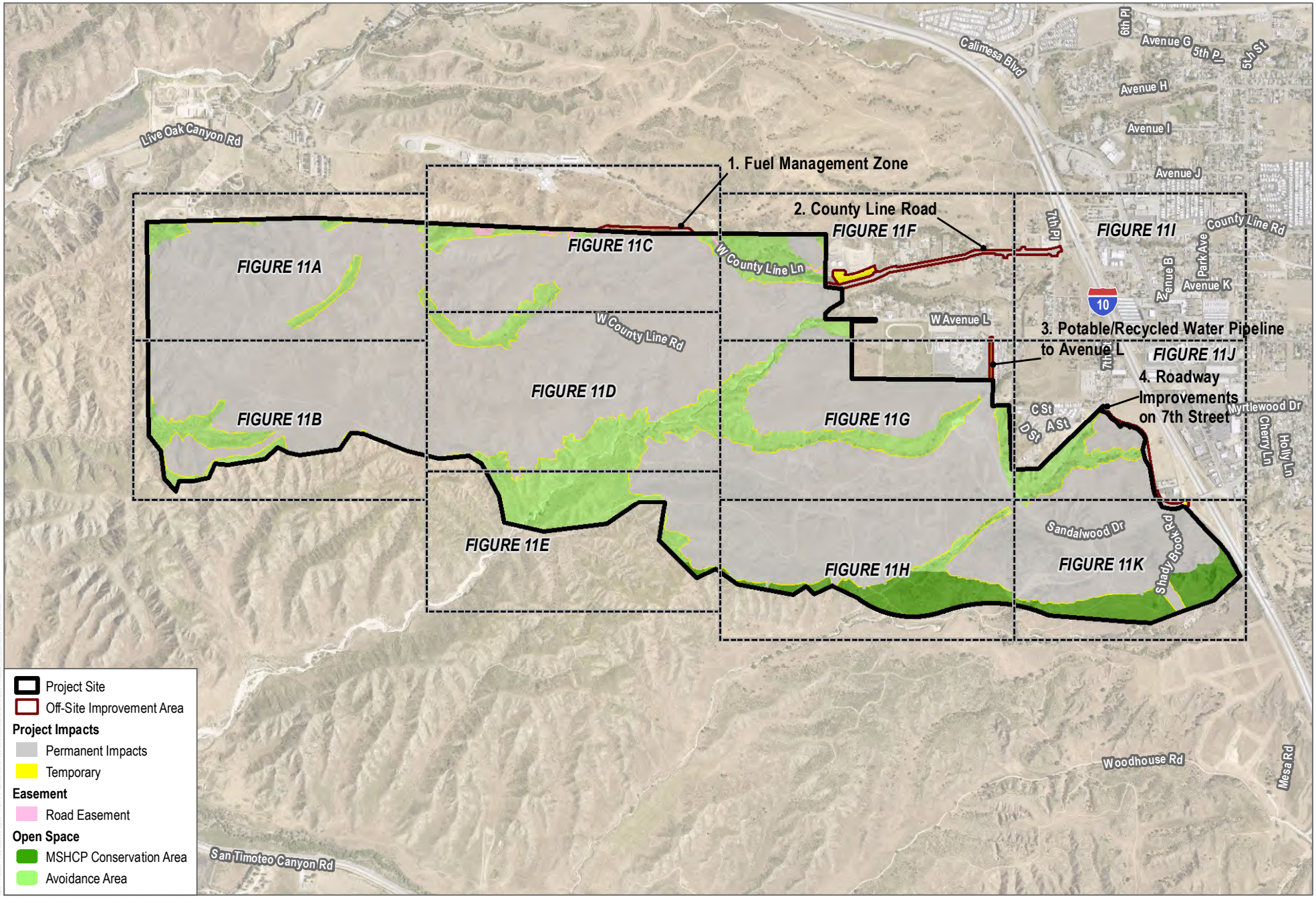
DUDEK

0 1,000 2,000 Feet

FIGURE 10

Project Conservation and Avoidance

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

DUDEK

FIGURE 11

Impacts to Biological Resources Overview

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Project Site

Project Impacts

Permanent

Temporary

Open Space

Avoidance

Vegetation and Land Cover Communities

Adefas - *Adenostoma fasciculatum*

Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*

Adefas-Lotsco-Eri - *Adenostoma fasciculatum - (Lotus scoparius - Eriodictyon spp.)*

Adefas-Salmel - *Adenostoma fasciculatum - Salvia mellifera*

Adefas-Salmel-Ceacra - *Adenostoma fasciculatum - Salvia mellifera - Ceanothus crassifolius*

Adefas-Salmel-Rhuova - *Adenostoma fasciculatum - Salvia mellifera - Rhus ovata*

Arcgla-Adefas-Quewis - *Arctostaphylos glandulosa - Adenostoma fasciculatum - Quercus wislizeni*

Artcal-Lotsco - *Artemisia californica - Lotus scoparius*

Ceacra-Adefas-Salmel - *Ceanothus crassifolius - Adenostoma fasciculatum - Salvia mellifera*

Corfil - *Corethrogyne filaginifolia*

Erifas - *Eriogonum fasciculatum*

Hirinc - *Hirschfeldia incana*

Kecant - *Keckiella antirrhinoides*

Lotsco - *Lotus scoparius*

Malfas - *Malacothamnus fasciculatus*

Rhuova - *Rhus ovata*

Salmel - *Salvia mellifera*

NNG - Non-Native Grassland

DH - Disturbed Habitat

NWW - Unvegetated wash and river bottom

Suitable Burrowing Owl Burrows

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11A

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Project Site

Project Impacts

Permanent

Temporary

Open Space

Avoidance

Vegetation and Land Cover Communities

Adefas - *Adenostoma fasciculatum*

Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*

Adefas-Salmel - *Adenostoma fasciculatum - Salvia mellifera*

Cermon - *Ceanothus tomentosus*

Corfil - *Corethrogyne filaginifolia*

Lotsco - *Lotus scoparius*

Malfas - *Malacothamnus fasciculatus*

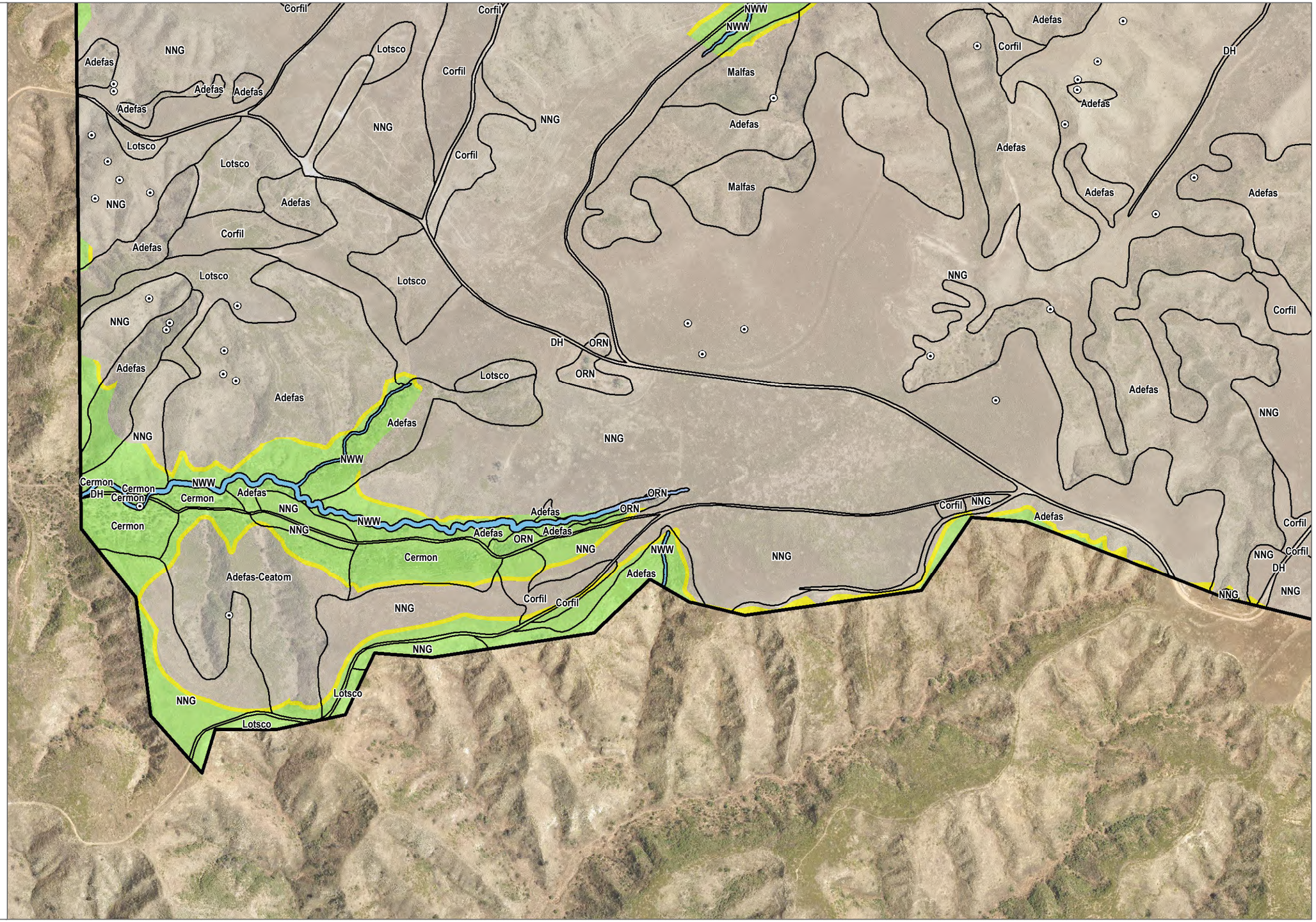
NNG - Non-Native Grassland

ORN - Ornamental Plantings

DH - Disturbed Habitat

NWW - Unvegetated wash and river bottom

Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11B

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area

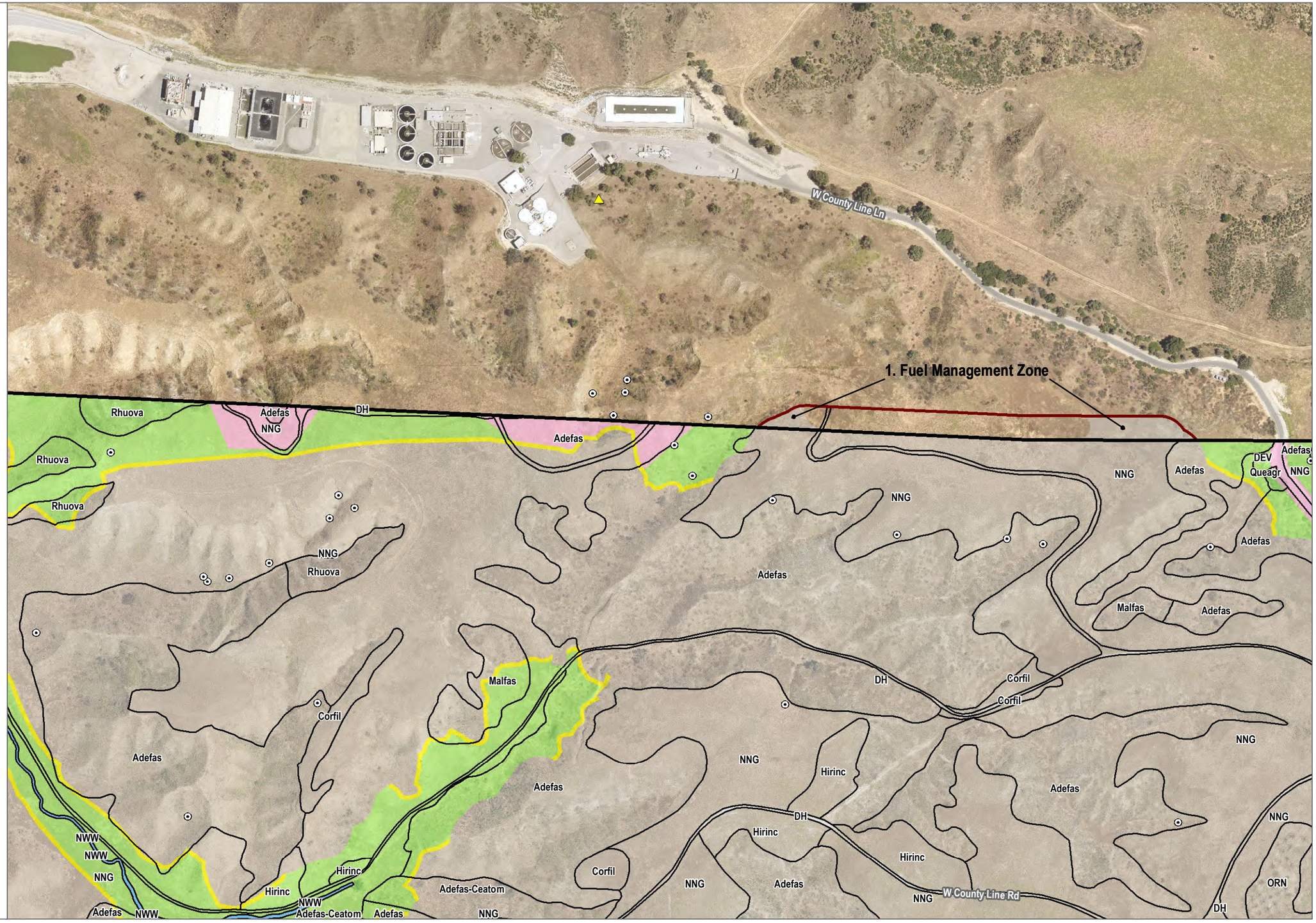
Project Impacts
- Permanent
- Temporary

Easement
- Road Easement

Open Space
- Avoidance

Vegetation and Land Cover Communities
- Adefas - *Adenostoma fasciculatum*
- Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*
- Corfil - *Corethrogyne filaginifolia*
- Hirinc - *Hirschfeldia incana*
- Malfas - *Malacothamnus fasciculatus*
- Queagr - *Quercus agrifolia*
- Rhuova - *Rhus ovata*
- NNG - Non-Native Grassland
- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- Urban/Developed
- NWW - Unvegetated wash and river bottom

Special-Status Wildlife
- yellow warbler
- Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11C

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Project Site

Project Impacts

Permanent

Temporary

Open Space

Avoidance

Vegetation and Land Cover Communities

Adefas - *Adenostoma fasciculatum*

Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*

Adefas-Erifas - *Adenostoma fasciculatum - Eriogonum fasciculatum*

Adefas-Salmel - *Adenostoma fasciculatum - Salvia mellifera*

Corfil - *Corethrogyne filaginifolia*

Hirinc - *Hirschfeldia incana*

Kecant - *Keckiella antirrhinoides*

Lotsco - *Lotus scoparius*

Malfas - *Malacothamnus fasciculatus*

Queagr - *Quercus agrifolia*

NNG - Non-Native Grassland

ORN - Ornamental Plantings

DH - Disturbed Habitat

NWW - Unvegetated wash and river bottom

Suitable Burrowing Owl Burrows

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11D

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Project Site

Project Impacts

Permanent

Temporary

Open Space

MSHCP Conservation

Avoidance

Vegetation and Land Cover Communities

Adefas - *Adenostoma fasciculatum*

Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*

Adefas-Erifas - *Adenostoma fasciculatum - Eriogonum fasciculatum*

Adefas-Salmel - *Adenostoma fasciculatum - Salvia mellifera*

Corfil - *Corethrogyne filaginifolia*

Hirinc - *Hirschfeldia incana*

Lotsco - *Lotus scoparius*

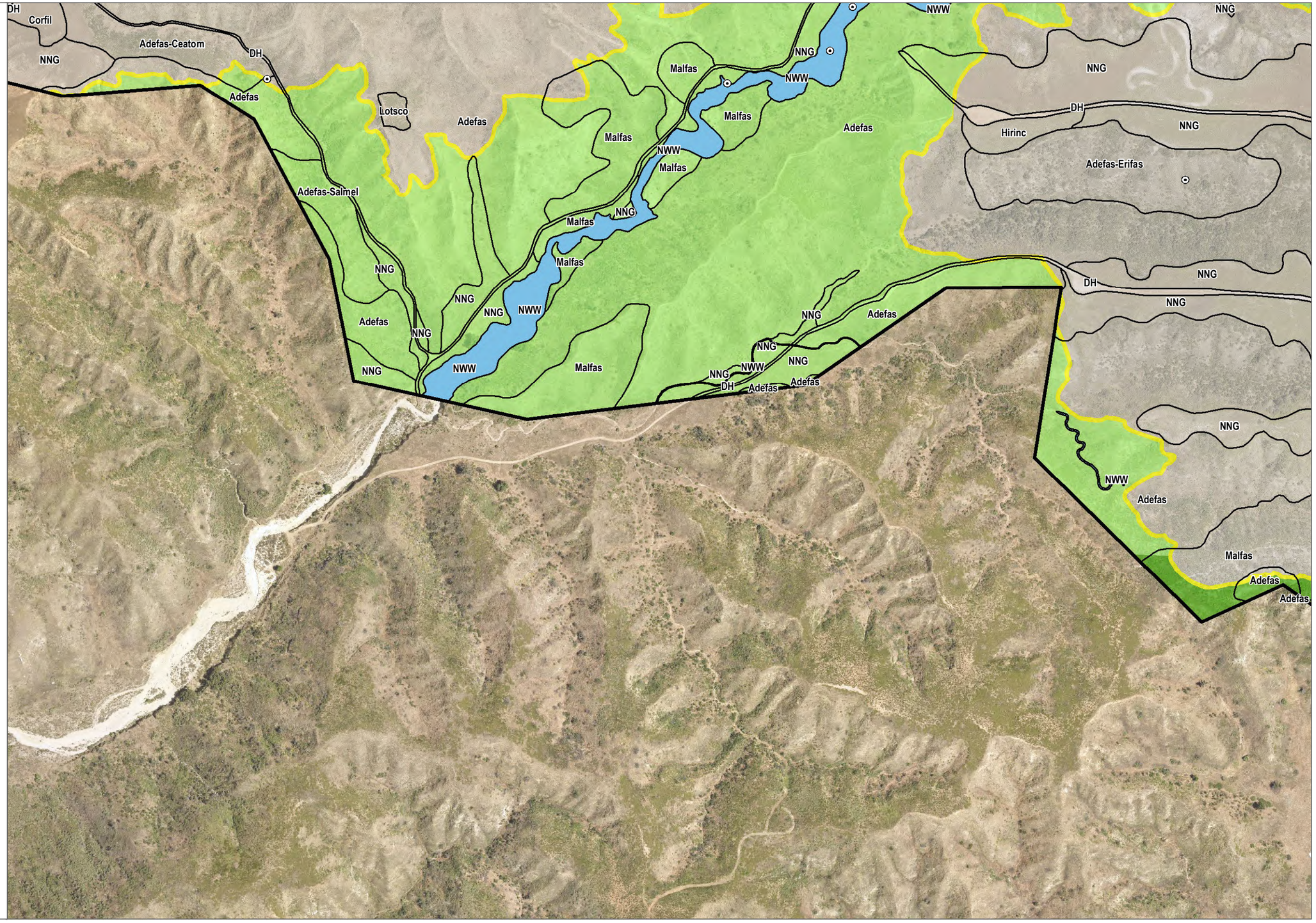
Malfas - *Malacothamnus fasciculatus*

NNG - Non-Native Grassland

DH - Disturbed Habitat

NWW - Unvegetated wash and river bottom

Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11E

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area

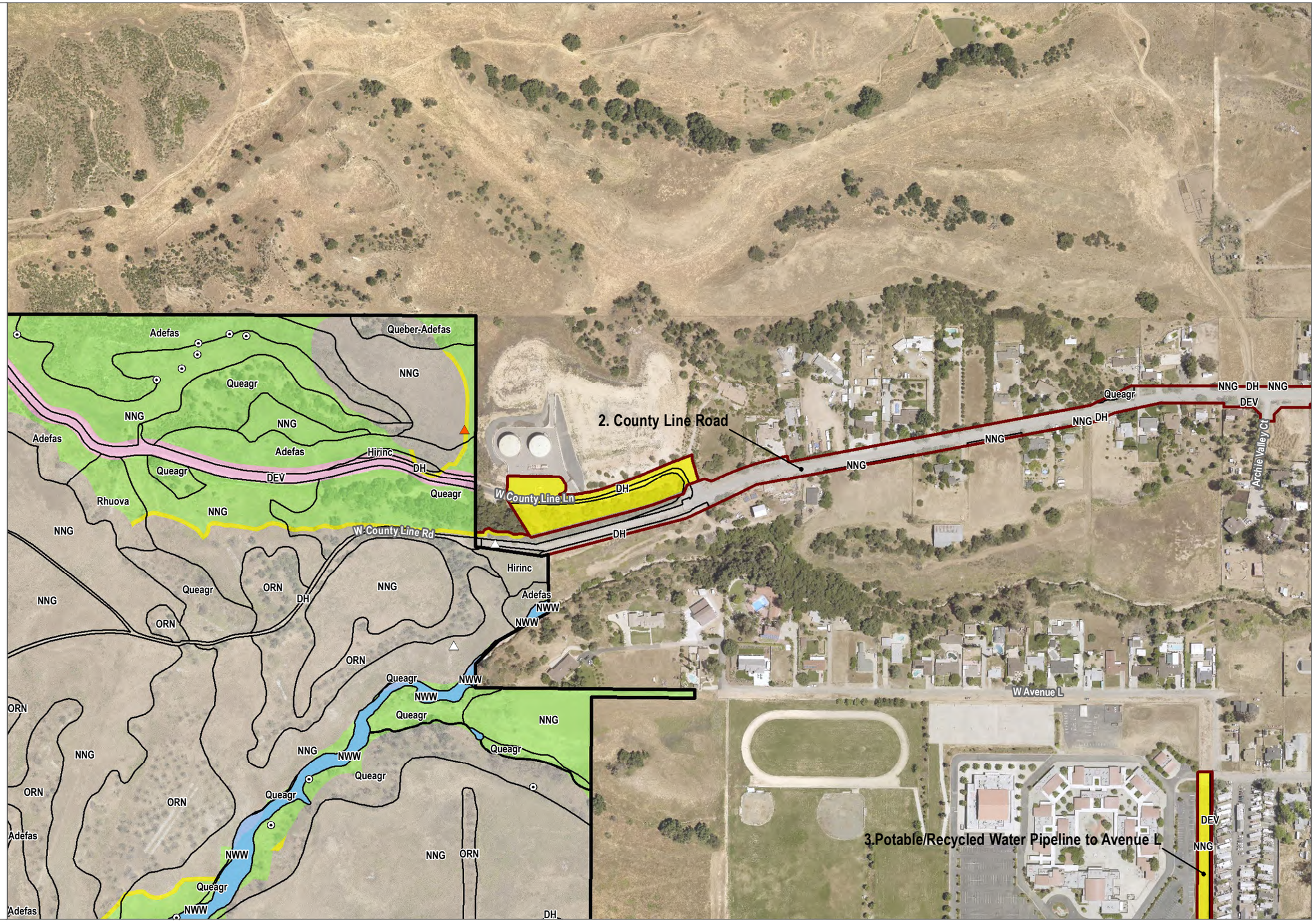
Project Impacts
- Permanent
- Temporary

Easement
- Road Easement

Open Space
- Avoidance

Vegetation and Land Cover Communities
- Adefas - *Adenostoma fasciculatum*
- Hirinc - *Hirschfeldia incana*
- Queagr - *Quercus agrifolia*
- Queber-Adefas - *Quercus berberidifolia - Adenostoma fasciculatum*
- Rhuova - *Rhus ovata*
- NNG - Non-Native Grassland
- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- Urban/Developed
- NWW - Unvegetated wash and river bottom

Special-Status Wildlife
- red diamond rattlesnake
- white-tailed kite
- Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11F

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area

Project Impacts

- Permanent
- Temporary

Open Space

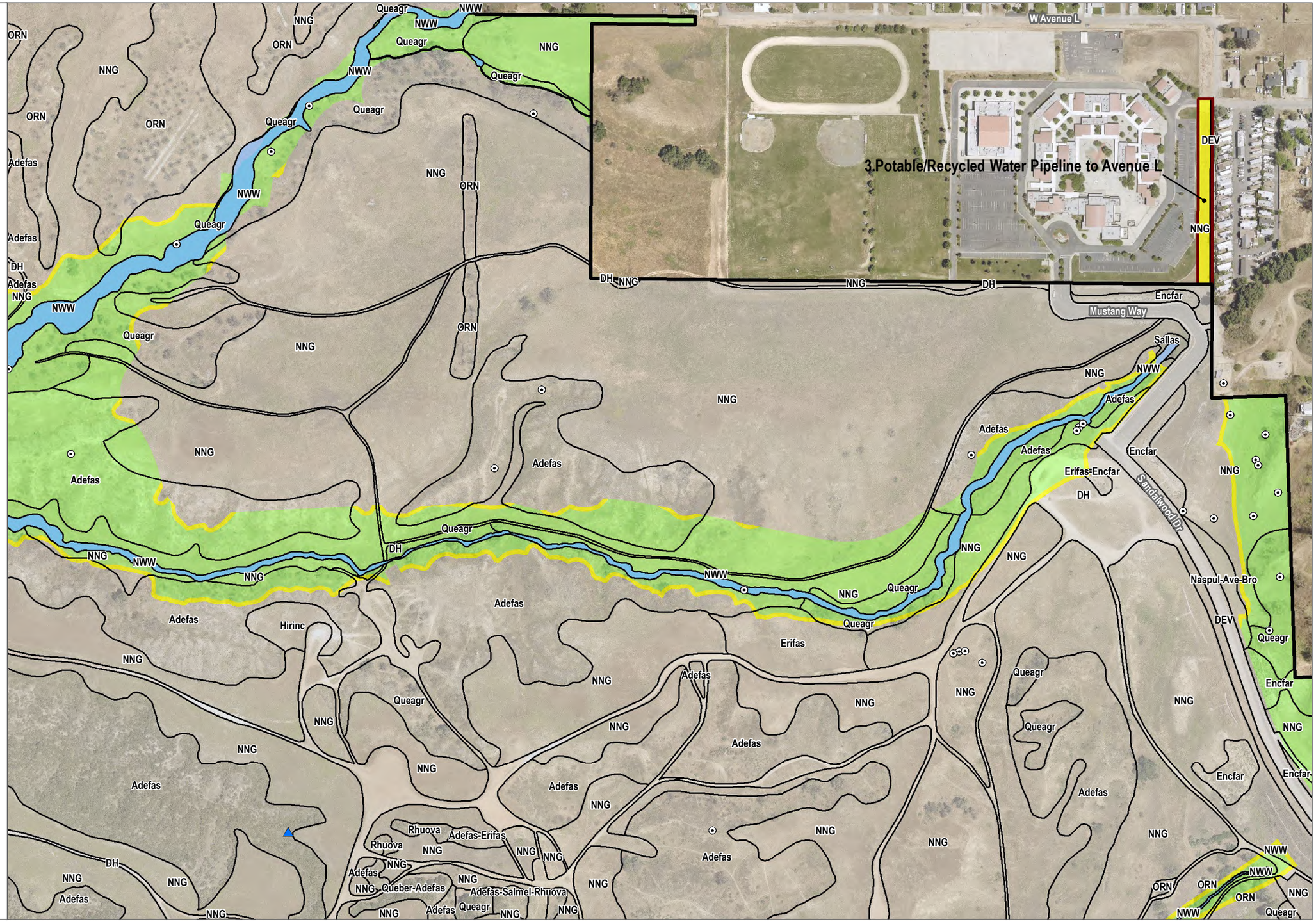
- Avoidance

Vegetation and Land Cover Communities

- Adefas - *Adenostoma fasciculatum*
- Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*
- Adefas-Erifas - *Adenostoma fasciculatum - Eriogonum fasciculatum*
- Adefas-Salmel-Rhuova - *Adenostoma fasciculatum - Salvia mellifera - Rhus ovata*
- Encfar - *Encelia farinosa*
- Erifas - *Eriogonum fasciculatum*
- Erifas-Encfar - *Eriogonum fasciculatum - Encelia farinosa*
- Hirinc - *Hirschfeldia incana*
- Naspul-Ave-Bro - *Nassella pulchra - Avena spp. - Bromus spp.*
- Queagr - *Quercus agrifolia*
- Queber-Adefas - *Quercus berberidifolia - Adenostoma fasciculatum*
- Rhuova - *Rhus ovata*
- Sallas - *Salix lasiolepis - disturbed*
- NNG - Non-Native Grassland
- ORN - Ornamental Plantings
- DH - Disturbed Habitat
- Urban/Developed
- NWW - Unvegetated wash and river bottom

Special-Status Wildlife

- northern harrier
- Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11G

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Project Site

Project Impacts

Permanent

Temporary

Open Space

MSHCP Conservation

Avoidance

Vegetation and Land Cover Communities

Adefas - *Adenostoma fasciculatum*

Adefas-Ceatom - *Adenostoma fasciculatum - (Ceanothus tomentosus)*

Adefas-Erifas - *Adenostoma fasciculatum - Eriogonum fasciculatum*

Adefas-Salmel-Rhuova - *Adenostoma fasciculatum - Salvia mellifera - Rhus ovata*

Encfar - *Encelia farinosa*

Erifas - *Eriogonum fasciculatum*

Malfas - *Malacothamnus fasciculatus*

Queagr - *Quercus agrifolia*

Queber-Adefas - *Quercus berberidifolia - Adenostoma fasciculatum*

Rhuova - *Rhus ovata*

Sal - *Salsola spp.*

Samnig - *Sambucus nigra*

NNG - Non-Native Grassland

ORN - Ornamental Plantings

DH - Disturbed Habitat

Urban/Developed

NWW - Unvegetated wash and river bottom

Special-Status Wildlife

northern harrier

Suitable Burrowing Owl Burrows

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11H

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Off-Site Improvement Area

Project Impacts

Permanent

Temporary

Vegetation and Land Cover Communities

Queagr - *Quercus agrifolia*

NNG - Non-Native Grassland

DH - Disturbed Habitat

Urban/Developed

Suitable Burrowing Owl Burrows

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11I

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

- Project Site
- Off-Site Improvement Area

Project Impacts

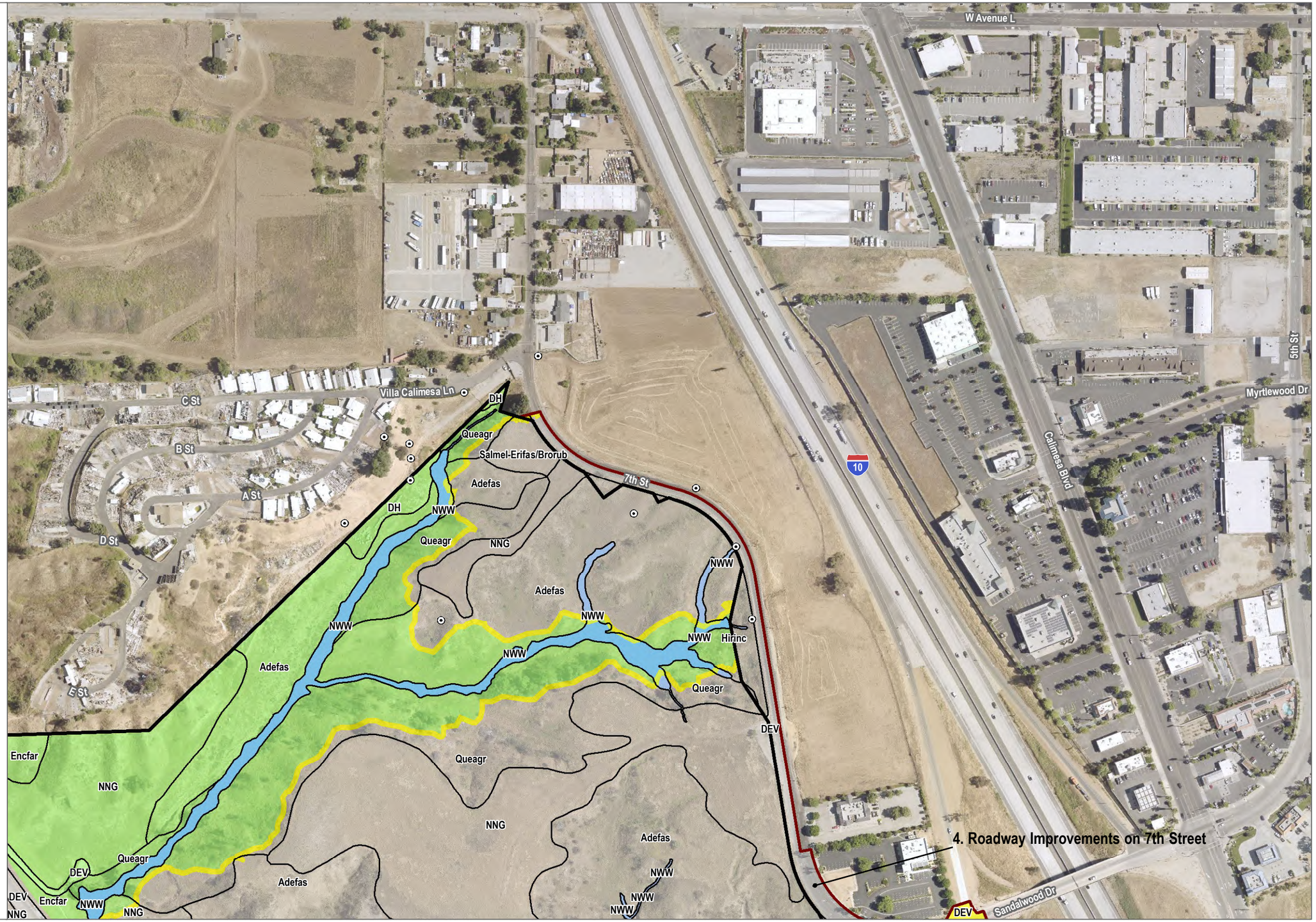
- Permanent
- Temporary

Open Space

- Avoidance

Vegetation and Land Cover Communities

- Adefas - *Adenostoma fasciculatum*
- Encfar - *Encelia farinosa*
- Hirinc - *Hirschfeldia incana*
- Queagr - *Quercus agrifolia*
- Salmel-Erifas/Brorub - *Salvia mellifera - Eriogonum fasciculatum / Bromus rubens*
- NNG - Non-Native Grassland
- DH - Disturbed Habitat
- Urban/Developed
- NWW - Unvegetated wash and river bottom
- Suitable Burrowing Owl Burrows



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11J

Impacts to Biological Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

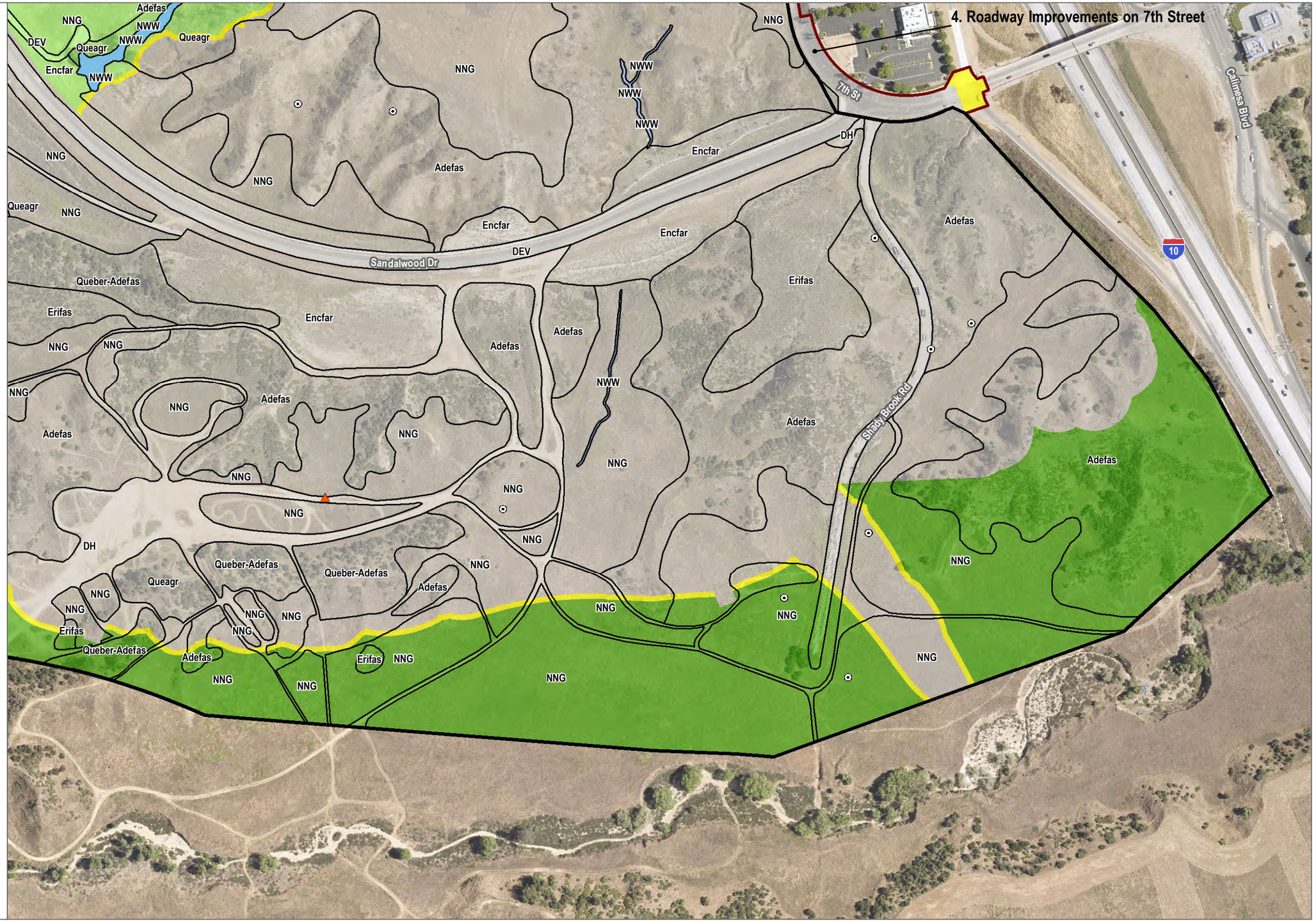
Project Site
Off-Site Improvement Area

Project Impacts
Permanent
Temporary

Open Space
MSHCP Conservation
Avoidance

Vegetation and Land Cover Communities
Adefas - *Adenostoma fasciculatum*
Encfar - *Encelia farinosa*
Erifas - *Eriogonum fasciculatum*
Queagr - *Quercus agrifolia*
Queber-Adefas - *Quercus berberidifolia - Adenostoma fasciculatum*
NNG - Non-Native Grassland
ORN - Ornamental Plantings
DH - Disturbed Habitat
Urban/Developed
NWW - Unvegetated wash and river bottom

Special-Status Wildlife
red diamond rattlesnake
Suitable Burrowing Owl Burrows

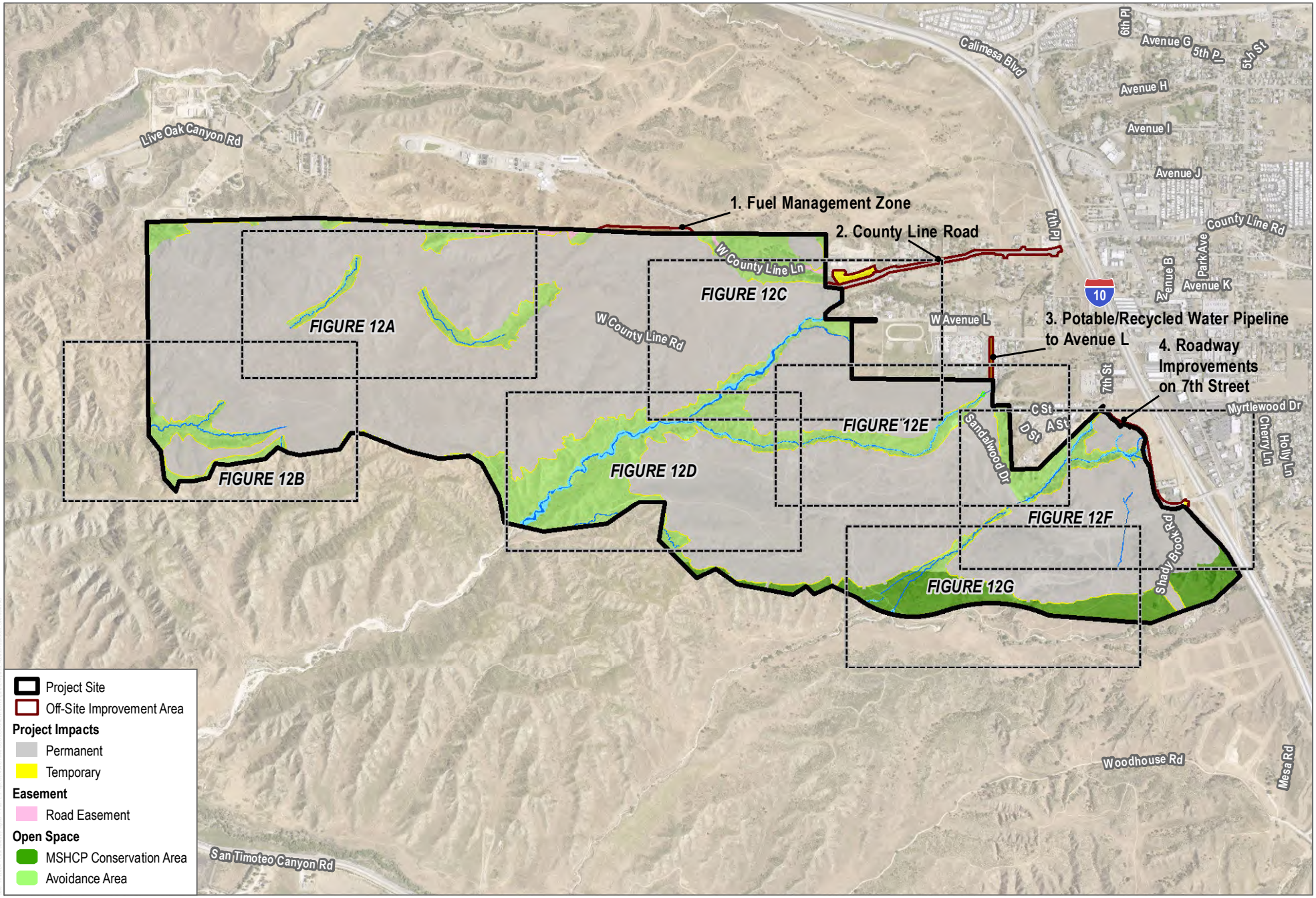


SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 200 400 Feet

FIGURE 11K
Impacts to Biological Resources
Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

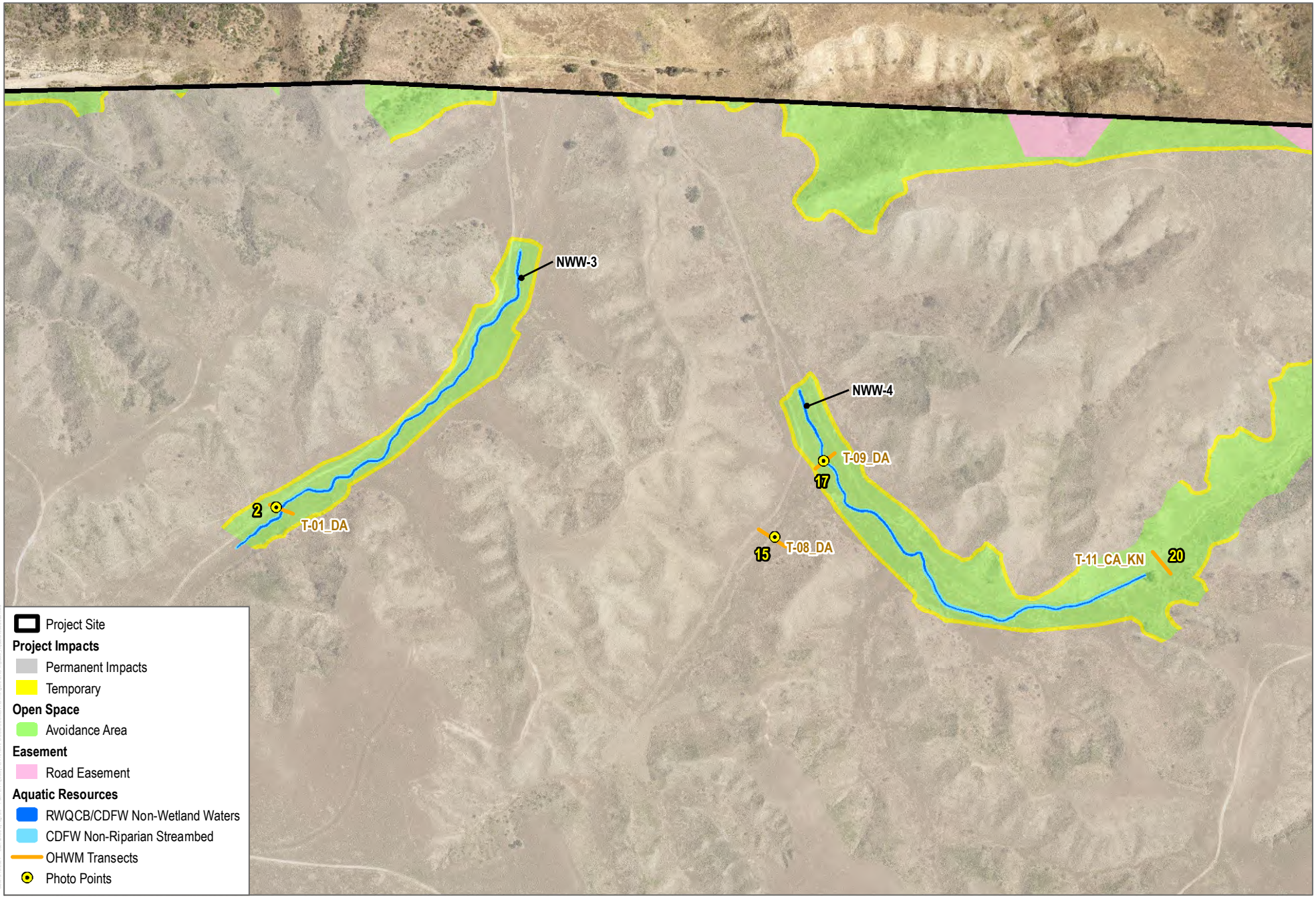
DUDEK

0 1,000 2,000 Feet

FIGURE 12

Impacts to Jurisdictional Aquatic Resources Overview

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

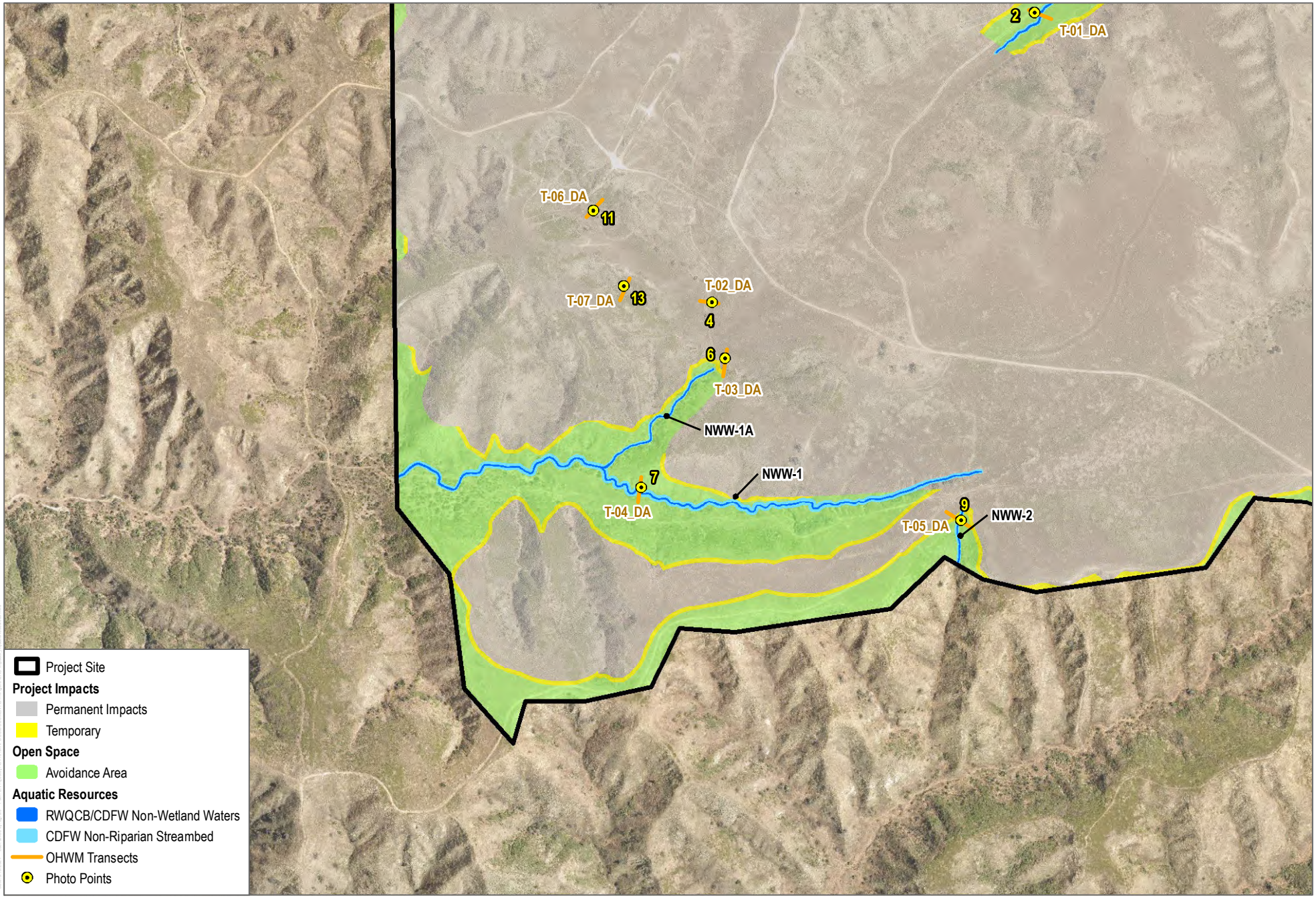
DUDEK

0 250 500 Feet

FIGURE 12A

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

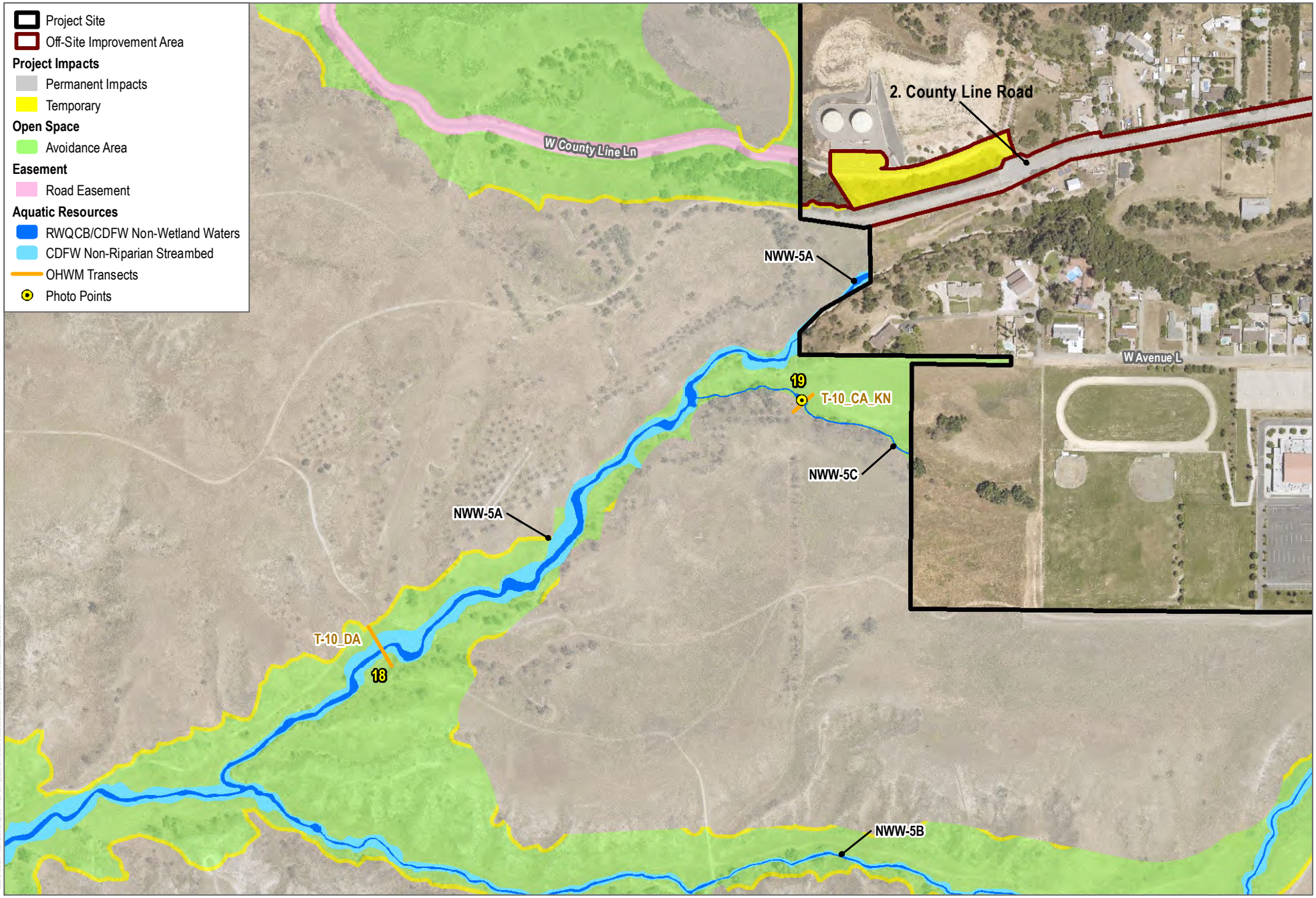
DUDEK

0 250 500 Feet

FIGURE 12B

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

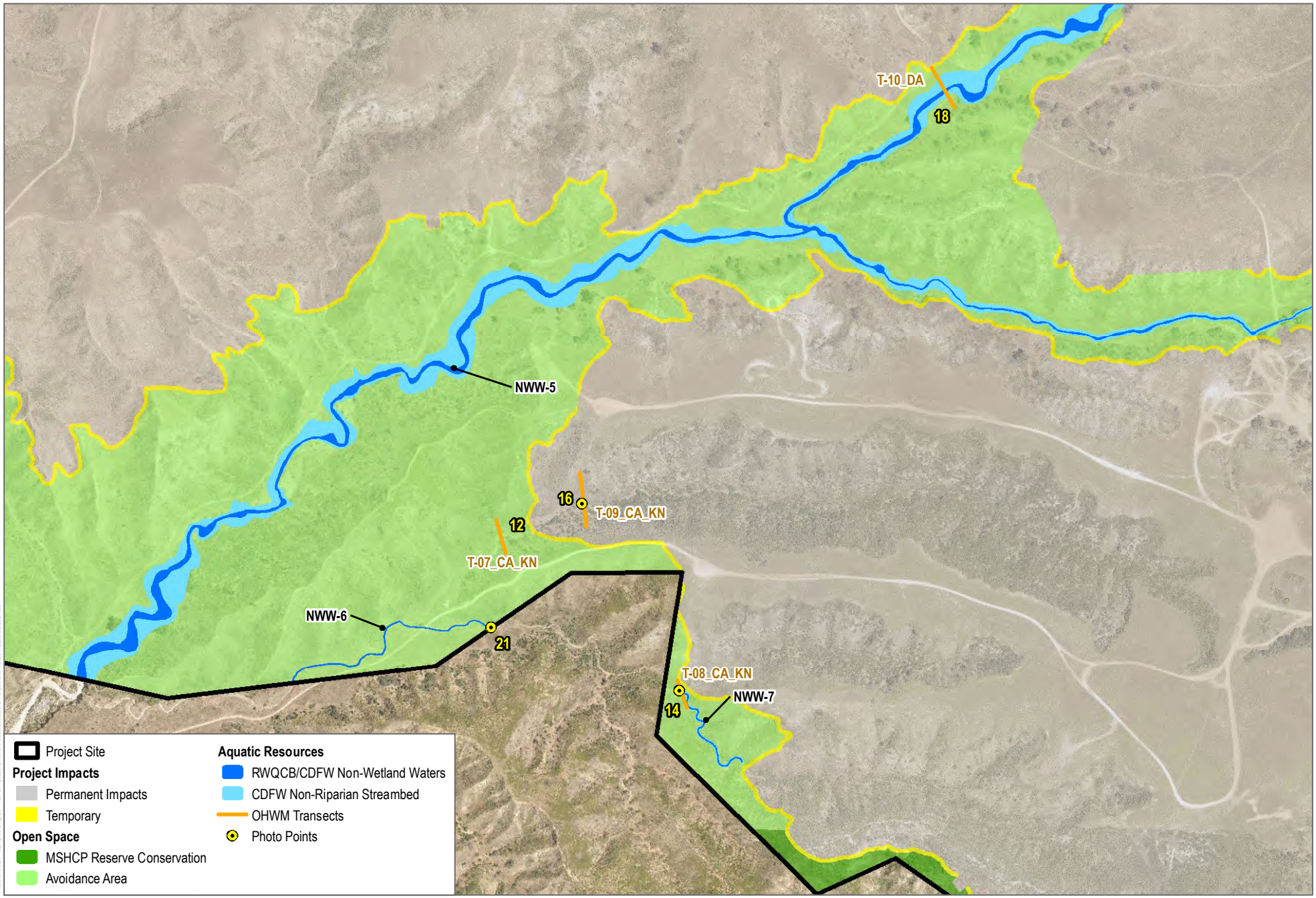
DUDEK

0 250 500 Feet

FIGURE 12C

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

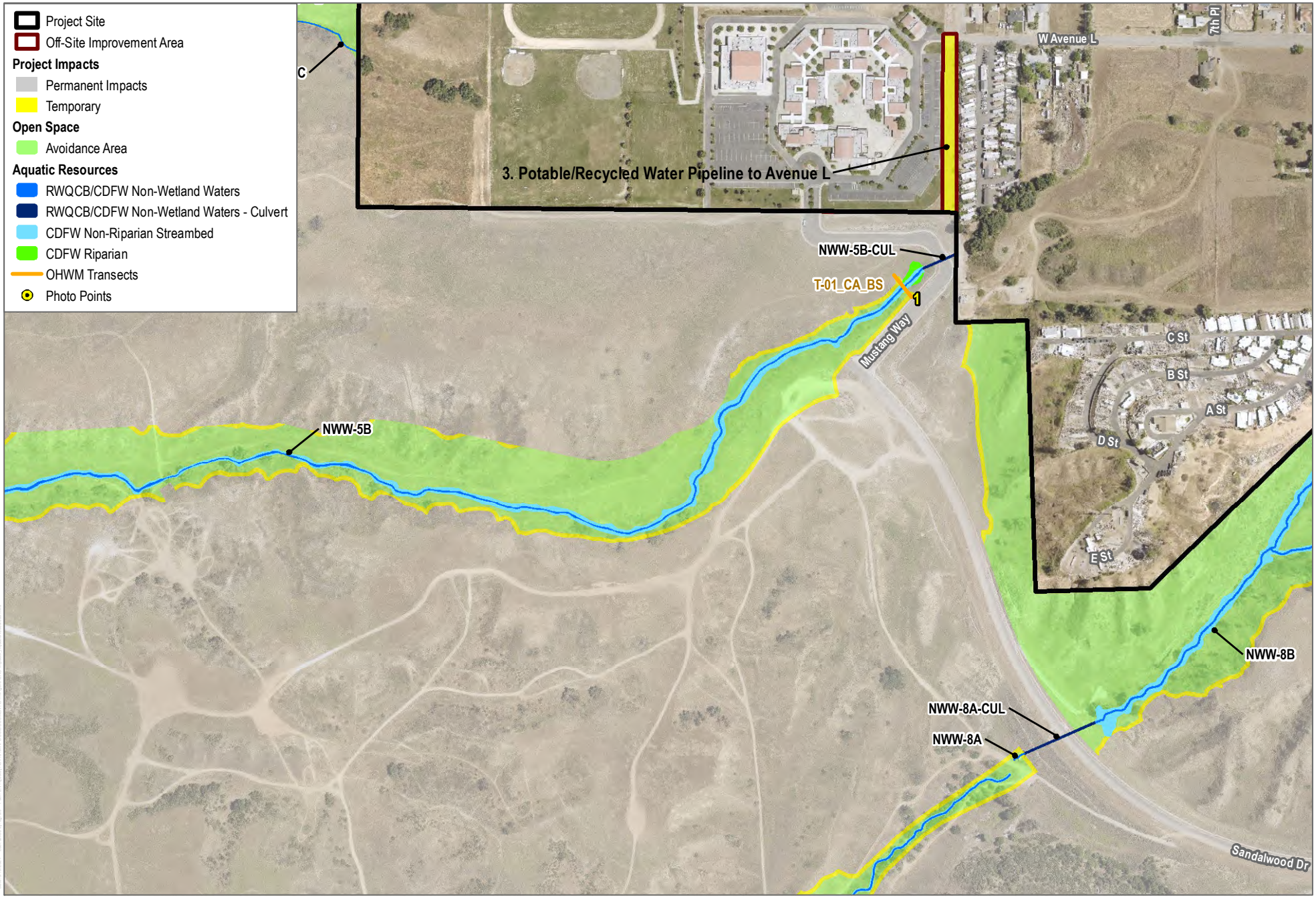
DUDEK

0 250 500 Feet

FIGURE 12D

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

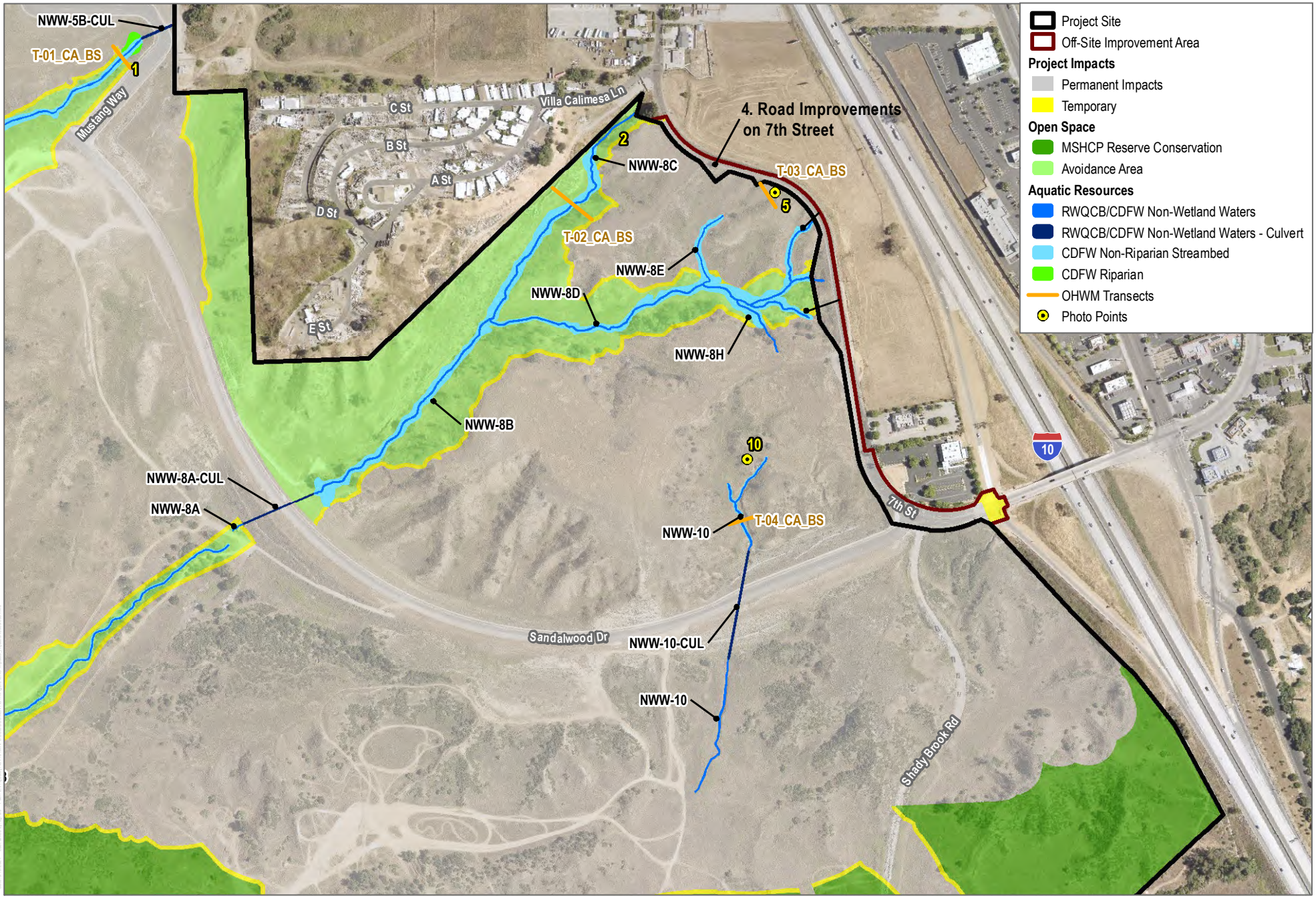
DUDEK

0 250 500 Feet

FIGURE 12E

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

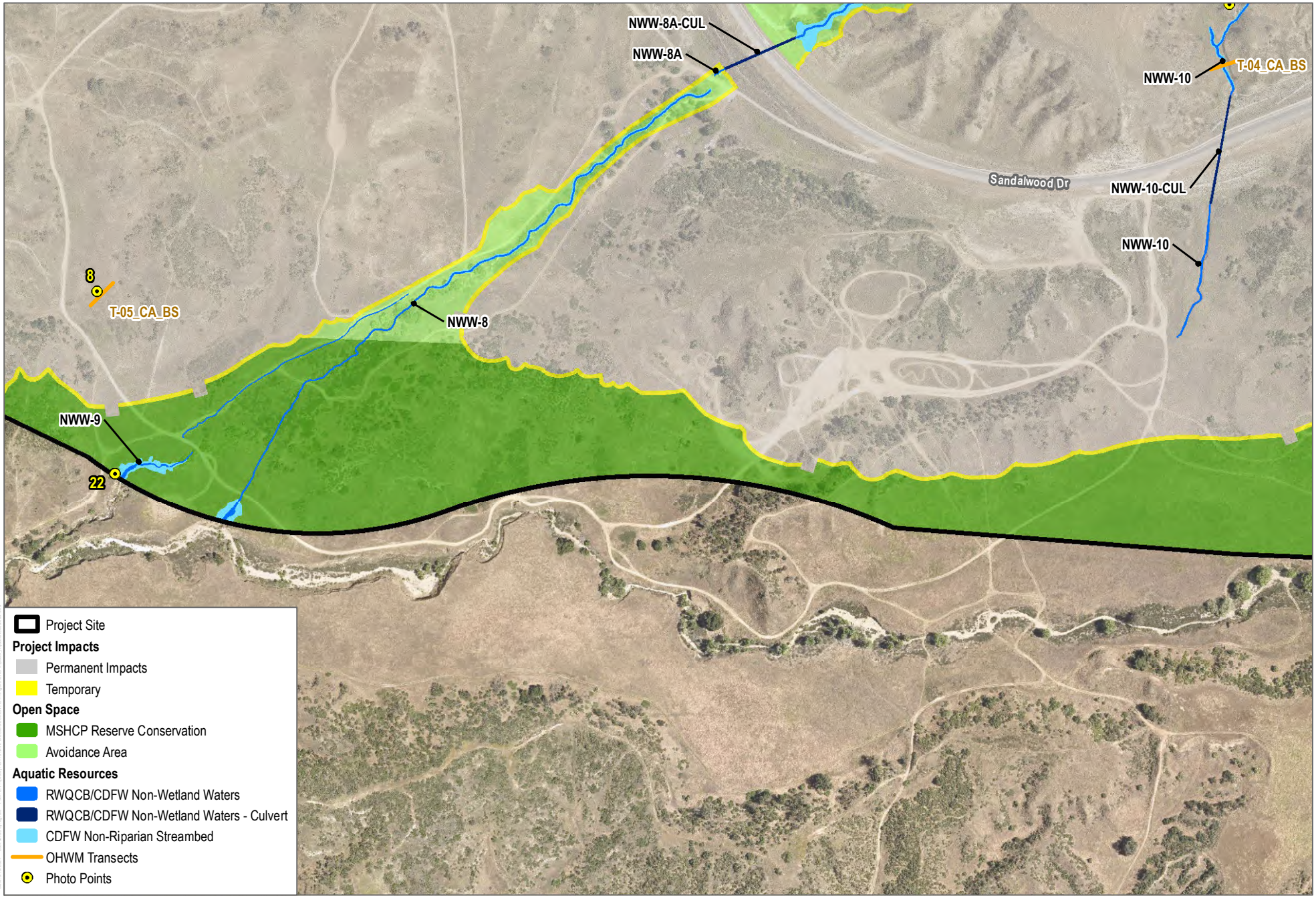
DUDEK

0 250 500 Feet

FIGURE 12F

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 12G

Impacts to Jurisdictional Aquatic Resources

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

Appendix B
Representative Photographs

Photo 1. NWW-8C along the northeastern boundary facing southwest.

Photo 2. Representative view of the eastern portion of site facing southeast.

Photo 3. Representative view of herbaceous habitat within southern portion of site facing northeast.

Photo 4. Southern portion of Project site facing south (117°3′38.35″W, 33°59′19.571″N).

Photo 5. Burrow (opening > 8 in.) located in southeastern portion of site (117°3′49.696″W, 33°59′20.987″N).

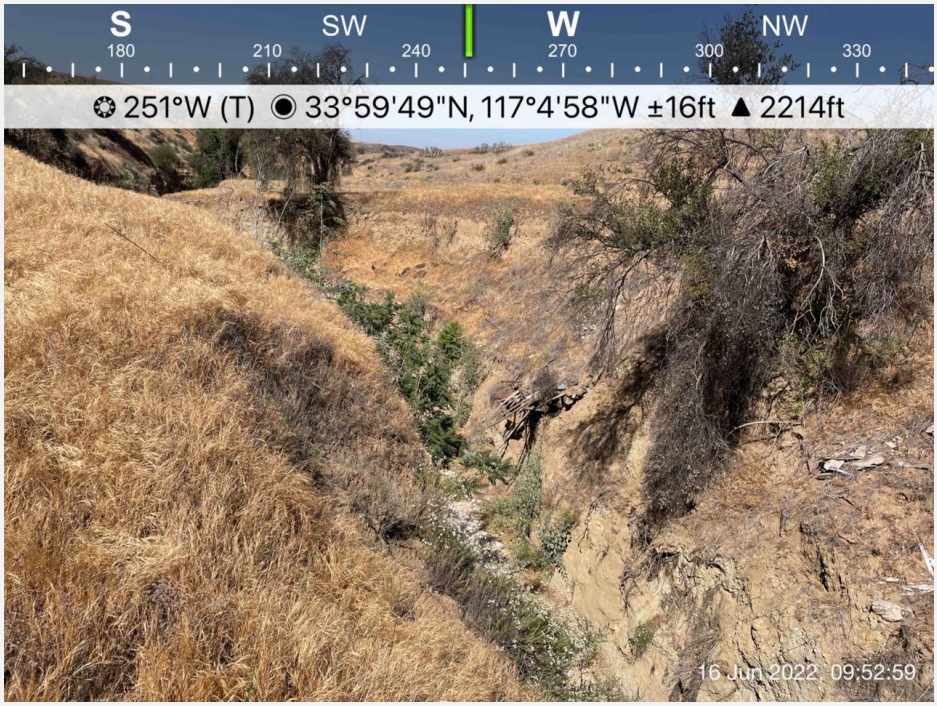


Photo 6. NWW-5A within central portion of site, facing southwest.

Photo 7. Northern harrier perched in tree above NWW-5B within the central portion of site facing north.

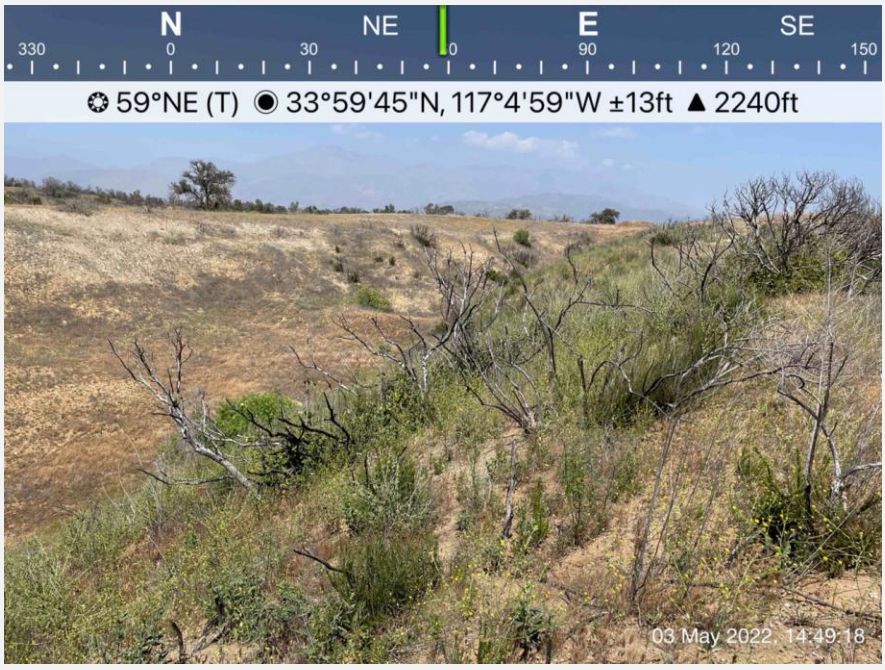


Photo 8. Much of the Project site has been burned and is in post-fire recovery. Representative photo of burned shrubs and regrowth within central portion of the site facing northeast.

Photo 9. Northwest portion of site facing north.

Photo 10. NWW-9 along the southern portion of site facing northeast.

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Appendix C
Plant Compendium

Vascular Species

Eudicots

AMARANTHACEAE—AMARANTH FAMILY

Amaranthus blitoides—mat amaranth

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Rhus aromatica—skunkbush sumac
Rhus integrifolia—lemonade berry
Rhus ovata—sugarbush
* *Schinus molle*—Peruvian peppertree
* *Schinus terebinthifolius*—Brazilian peppertree

APIACEAE—CARROT FAMILY

* *Anthriscus caucalis*—bur chervil
Apiastrum angustifolium—mock parsley
Bowlesia incana—hoary bowlesia

ASTERACEAE—SUNFLOWER FAMILY

Achillea millefolium—common yarrow
Acourtia microcephala—sacapellote
Ambrosia acanthicarpa—flatspine bur ragweed
Ambrosia confertiflora—weakleaf bur ragweed
Ambrosia psilostachya—western ragweed
Artemisia californica—California sagebrush
Artemisia dracunculus—wild tarragon
Baccharis salicifolia ssp. *salicifolia*—mulefat
* *Carduus pycnocephalus* ssp. *pycnocephalus*—Italian plumeless thistle
* *Centaurea melitensis*—Maltese star-thistle
Chaenactis artemisiifolia—white pincushion
Chaenactis glabriuscula—yellow pincushion
Cirsium occidentale—cobwebby thistle
Corethrogyne filaginifolia—sand-aster
Deinandra fasciculata—clustered tarweed
Deinandra kelloggii—Kellogg's tarweed
Encelia farinosa—brittle bush
Ericameria pinifolia—pinebush
Erigeron canadensis—Canadian horseweed
Erigeron foliosus var. *foliosus*—leafy fleabane

Eriophyllum confertiflorum var. *confertiflorum*—golden-yarrow
Eriophyllum multicaule—manystem woolly sunflower
* *Gazania linearis*—treasureflower
Gutierrezia californica—California match weed
Gutierrezia sarothrae—broom snakeweed
Hazardia squarrosa—sawtooth golden bush
* *Hedypnois rhagadioloides*—Crete weed
Helianthus californicus—California sunflower
Helianthus gracilentus—slender sunflower
Heterotheca grandiflora—telegraphweed
Heterotheca sessiliflora—sessileflower false goldenaster
* *Hypochaeris glabra*—smooth cat's ear
* *Lactuca serriola*—prickly lettuce
Lepidospartum squamatum—scale broom
Logfia filaginoides—California cottonrose
* *Logfia gallica*—narrowleaf cottonrose
Malacothrix saxatilis—cliff desertdandelion
Matricaria discoidea—disc mayweed
* *Oncosiphon pilulifer*—stinknet
Pseudognaphalium beneolens—Wright's cudweed
Pseudognaphalium californicum—ladies' tobacco
Rafinesquia californica—California plumeseed
* *Senecio vulgaris*—old-man-in-the-spring
* *Sonchus oleraceus*—common sowthistle
Stephanomeria exigua—small wirelettuce
Stephanomeria virgata ssp. *pleurocarpa*—wand wirelettuce
Stylocline gnaphaloides—mountain neststraw
Tetradymia comosa—hairy horsebrush
Uropappus lindleyi—Lindley's silverpuffs
Xanthium strumarium—cocklebur

BETULACEAE—BIRCH FAMILY

Alnus rhombifolia—white alder

BIGNONIACEAE—BIGNONIA FAMILY

* *Catalpa speciosa*—northern catalpa

BORAGINACEAE—BORAGE FAMILY

Amsinckia intermedia—common fiddleneck
Amsinckia menziesii—Menzies' fiddleneck
Amsinckia retrorsa—Menzies' fiddleneck

Cryptantha intermedia var. *intermedia*—Clearwater cryptantha
Cryptantha microstachys—Tejon cryptantha
Pectocarya linearis ssp. *ferocula*—sagebrush combseed
Pectocarya penicillata—sleeping combseed
Plagiobothrys nothofulvus—popcorn flower

BRASSICACEAE—MUSTARD FAMILY

* *Brassica tournefortii*—Tournefort's mustard
* *Descurainia sophia*—herb sophia
* *Hirschfeldia incana*—shortpod mustard
* *Lepidium didymum*—lesser swinecress
* *Sisymbrium altissimum*—tall tumblemustard
* *Sisymbrium irio*—London rocket

Thysanocarpus laciniatus—mountain fringepod

CACTACEAE—CACTUS FAMILY

Cylindropuntia bernardina—brownspined pricklypear
Opuntia phaeacantha—tulip pricklypear

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Lonicera interrupta—chaparral honeysuckle
Lonicera subspicata var. *denudata*—Santa Barbara honeysuckle

CARYOPHYLLACEAE—PINK FAMILY

* *Herniaria hirsuta* var. *hirsuta*—hairy rupturewort
* *Spergularia rubra*—red sandspurry
* *Stellaria media*—common chickweed

CHENOPODIACEAE—GOOSEFOOT FAMILY

* *Chenopodium album*—lambsquarters

Chenopodium californicum—California goosefoot

* *Salsola tragus*—prickly Russian thistle

CONVOLVULACEAE—MORNING-GLORY FAMILY

* *Convolvulus arvensis*—field bindweed

Cuscuta californica—chaparral dodder

CRASSULACEAE—STONECROP FAMILY

Dudleya lanceolata—lanceleaf liveforever

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—Missouri gourd
Marah macrocarpa—Cucamonga manroot

EUPHORBIACEAE—SPURGE FAMILY

Croton californicus—California croton
Croton setiger—dove weed
Euphorbia albomarginata—whitemargin sandmat
* *Euphorbia serpens*—matted sandmat

FABACEAE—LEGUME FAMILY

* *Acacia baileyana*—cootamundra wattle
Acmispon glaber var. *brevialatus*—western bird's-foot trefoil
Acmispon strigosus—strigose bird's-foot trefoil
Acmispon wrangelianus—Chilean bird's-foot trefoil
Astragalus pomonensis—Pomona milkvetch
* *Ceratonia siliqua*—St. John's bread
Lupinus bicolor—miniature lupine
Lupinus hirsutissimus—stinging annual lupine
Lupinus microcarpus var. *densiflorus*—whitewhorl lupine
Lupinus sparsiflorus—Coulter's lupine
Lupinus succulentus—hollowleaf annual lupine
* *Medicago polymorpha*—burclover
* *Melilotus indicus*—annual yellow sweetclover
Prosopis glandulosa var. *torreyana*—western honey mesquite
* *Robinia pseudoacacia*—black locust
* *Spartium junceum*—Spanish broom
* *Vicia villosa* ssp. *villosa*—winter vetch

FAGACEAE—OAK FAMILY

Quercus ×*acutidens*—hybrid oak
Quercus agrifolia var. *agrifolia*—coast live oak
Quercus agrifolia—coast live oak
Quercus berberidifolia—Inland scrub oak
Quercus wislizeni—interior live oak

GERANIACEAE—GERANIUM FAMILY

* *Erodium botrys*—longbeak stork's bill
* *Erodium cicutarium*—redstem stork's bill
* *Erodium moschatum*—musky stork's bill

HYDROPHYLLACEAE—WATERLEAF FAMILY

Emmenanthe penduliflora—whisperingbells
Eucrypta chrysanthemifolia var. *chrysanthemifolia*—spotted hideseed
Nemophila menziesii—baby blue eyes
Phacelia brachyloba—shortlobe phacelia
Phacelia cicutaria var. *hispida*—caterpillar phacelia
Phacelia distans—distant phacelia
Phacelia minor—wild Canterbury bells
Phacelia parryi—Parry's phacelia

JUGLANDACEAE—WALNUT FAMILY

Juglans californica—Southern California black walnut

LAMIACEAE—MINT FAMILY

* *Lamium amplexicaule*—henbit deadnettle
* *Marrubium vulgare*—horehound
Salvia apiana—white sage
Salvia columbariae—chia
Salvia mellifera—black sage
Trichostema lanceolatum—vinegarweed
Trichostema parishii—Parish's bluecurls

LOASACEAE—LOASA FAMILY

Mentzelia micrantha—San Luis blazingstar

MALVACEAE—MALLOW FAMILY

Malacothamnus fasciculatus—bush mallow
* *Malva parviflora*—cheeseweed mallow

MELIACEAE—MAHOGANY FAMILY

* *Melia azedarach*—Chinaberrytree

MONTIACEAE—MONTIA FAMILY

Calandrinia menziesii—red maids
Claytonia parviflora—streambank springbeauty
Claytonia perfoliata—miner's lettuce

MORACEAE—MULBERRY FAMILY

* *Ficus carica*—edible fig

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus camaldulensis*—river redgum

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis—desert wishbone-bush

OLEACEAE—OLIVE FAMILY

Fraxinus dipetala—California ash

Fraxinus velutina—velvet ash

* *Olea europaea*—olive

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia campestris ssp. *campestris*—Mojave suncup

Camissoniopsis hirtella—Santa Cruz Island suncup

Camissoniopsis micrantha—miniature suncup

Clarkia dudleyana—Dudley's clarkia

Clarkia epilobioides—canyon clarkia

Clarkia purpurea ssp. *quadrivulnera*—winecup clarkia

Clarkia similis—Ramona clarkia

Eulobus californicus—California suncup

PAEONIACEAE—PEONY FAMILY

Paeonia californica—California peony

PAPAVERACEAE—POPPY FAMILY

Argemone munita—flatbud pricklypoppy

Ehrendorferia chrysantha—golden eardrops

Eschscholzia caespitosa—tufted poppy

PHRYMACEAE—LOPSEED FAMILY

Diplacus brevipes—widethroat yellow monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

Collinsia concolor—Chinese houses

Keckiella antirrhinoides var. *antirrhinoides*—snapdragon penstemon

Keckiella cordifolia—heartleaf keckiella

Penstemon spectabilis—showy penstemon

Plantago erecta—dwarf plantain

* *Veronica persica*—birdeye speedwell

POLEMONIACEAE—PHLOX FAMILY

Gilia angelensis—chaparral gilia

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum elongatum var. *elongatum*—longstem buckwheat

Eriogonum fasciculatum var. *foliolosum*—California buckwheat
Eriogonum fasciculatum var. *polifolium*—California buckwheat
* *Polygonum aviculare*—prostrate knotweed
Pterostegia drymarioides—woodland pterostegia

RANUNCULACEAE—BUTTERCUP FAMILY

Clematis pauciflora—ropevine clematis
Delphinium parryi ssp. *parryi*—San Bernardino larkspur

RHAMNACEAE—BUCKTHORN FAMILY

Ceanothus crassifolius var. *crassifolius*—hoary leaf ceanothus
Ceanothus oliganthus—hairy leaf ceanothus
Ceanothus tomentosus—woolly leaf ceanothus
Rhamnus crocea—redberry buckthorn

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise
Cercocarpus betuloides var. *betuloides*—birchleaf mountain mahogany
Heteromeles arbutifolia—toyon
Prunus ilicifolia ssp. *ilicifolia*—mainland cherry
* *Pyracantha fortuneana*—Chinese firethorn

RUBIACEAE—MADDER FAMILY

Galium angustifolium ssp. *angustifolium*—narrowleaf bedstraw
Galium aparine—stickywilly

SALICACEAE—WILLOW FAMILY

Populus fremontii ssp. *fremontii*—Fremont cottonwood

SAXIFRAGACEAE—SAXIFRAGE FAMILY

Lithophragma bolanderi—Bolander's woodland-star

SIMAROUBACEAE—QUASSIA OR SIMAROUBA FAMILY

* *Ailanthus altissima*—tree of heaven

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple
* *Nicotiana glauca*—tree tobacco
Solanum parishii—Parish's nightshade
Solanum umbelliferum—bluewitch nightshade
Solanum xanti—Purple nightshade

URTICACEAE—NETTLE FAMILY

Hesperocnide tenella—western stingingnettle

* *Urtica urens*—dwarf nettle

VIBURNACEAE—MUSKROOT FAMILY

Sambucus mexicana—blue elderberry

ZYGOPHYLLACEAE—CALTROP FAMILY

* *Tribulus terrestris*—puncturevine

Ferns and Fern Allies

PTERIDACEAE—BRAKE FAMILY

Pellaea andromedifolia—coffee cliffbrake

SELAGINELLACEAE—SPIKE-MOSS FAMILY

Selaginella bigelovii—bushy spikemoss

Monocots

AGAVACEAE—AGAVE FAMILY

Chlorogalum pomeridianum—wavyleaf soap plant

Hesperoyucca whipplei—chaparral yucca

Yucca schidigera—Mojave yucca

ALLIACEAE—ONION FAMILY

Allium peninsulare—Mexicali onion

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

LILIACEAE—LILY FAMILY

Calochortus concolor—goldenbowl mariposa lily

Calochortus splendens—splendid mariposa lily

MELANTHIACEAE—FALSE HELLEBORE FAMILY

Toxicoscordion fremontii—Fremont's deathcamas

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat

* *Avena fatua*—wild oat

* *Bromus diandrus*—ripgut brome

* *Bromus hordeaceus*—soft brome
* *Bromus madritensis*—compact brome
* *Bromus rubens*—red brome
* *Bromus tectorum*—cheatgrass
* *Cynodon dactylon*—Bermudagrass
  Elymus condensatus—giant wild rye
* *Festuca myuros*—rat-tail fescue
* *Hordeum murinum*—mouse barley
* *Hordeum vulgare*—common barley
* *Lamarckia aurea*—goldentop grass
  Melica imperfecta—smallflower melicgrass
  Muhlenbergia rigens—deer grass
* *Pennisetum setaceum*—fountain grass
* *Phalaris minor*—littleseed canarygrass
* *Schismus arabicus*—Arabian schismus
* *Schismus barbatus*—common Mediterranean grass
* *Secale cereale*—cereal rye
* *Sorghum halepense*—Johnsongrass
  Stipa lepida—foothill needlegrass
  Stipa pulchra—purple needlegrass

THEMIDACEAE—BRODIAEA FAMILY

Bloomeria crocea var. *crocea*—common goldenstar
Dipterostemon capitatus ssp. *capitatus*—bluedicks

* signifies introduced (non-native) species

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Appendix D
Wildlife Compendium

Birds

Blackbirds, Orioles, and Allies

ICTERIDAE—BLACKBIRDS

Icterus bullockii—Bullock's oriole
Icterus cucullatus—hooded oriole
Sturnella neglecta—western meadowlark

Bushtits

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

Cardinals, Grosbeaks, and Allies

CARDINALIDAE—CARDINALS AND ALLIES

Passerina amoena—lazuli bunting
Passerina caerulea—blue grosbeak

Cormorants

PHALACROCORACIDAE—CORMORANTS

Nannopterum auritus—double-crested cormorant

Falcons

FALCONIDAE—CARACARAS AND FALCONS

Falco mexicanus—prairie falcon
Falco sparverius—American kestrel

Finches

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch
Spinus psaltria—lesser goldfinch

Flycatchers

TYRANNIDAE—TYRANT FLYCATCHERS

Myiarchus cinerascens—ash-throated flycatcher
Sayornis nigricans—black phoebe
Sayornis saya—Say's phoebe
Tyrannus verticalis—western kingbird
Tyrannus vociferans—Cassin's kingbird

Hawks

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii—Cooper's hawk
Buteo jamaicensis—red-tailed hawk
Buteo lineatus—red-shouldered hawk
Elanus leucurus—white-tailed kite
Circus hudsonius—northern harrier

Hummingbirds

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird
Calypte costae—Costa's hummingbird
Selasphorus sasin—Allen's hummingbird

Jays, Magpies, and Crows

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay
Corvus brachyrhynchos—American crow
Corvus corax—common raven

Mockingbirds and Thrashers

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

New World Quail

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

New World Vultures

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

Old World Sparrows

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

Old World Warblers and Gnatcatchers

POLIOPTILIDAE—GNATCATCHERS

Polioptila caerulea—blue-gray gnatcatcher

Owls

TYTONIDAE—BARN OWLS

Tyto alba—barn owl

STRIGIDAE—TYPICAL OWLS

Bubo virginianus—great horned owl

Pigeons and Doves

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Streptopelia decaocto*—Eurasian collared-dove

Roadrunners and Cuckoos

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

Shorebirds

CHARADRIIDAE—LAPWINGS AND PLOVERS

Charadrius vociferus—killdeer

Silky Flycatchers

PTILOGONATIDAE—SILKY-FLYCATCHERS

Phainopepla nitens—phainopepla

Starlings and Allies

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

Swallows

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

Petrochelidon pyrrhonota—cliff swallow

Stelgidopteryx serripennis—northern rough-winged swallow

Tachycineta thalassina—violet-green swallow

Swifts

APODIDAE—SWIFTS

Aeronautes saxatalis—white-throated swift

Wood Warblers and Allies

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

Setophaga petechia—yellow warbler

Woodpeckers

PICIDAE—WOODPECKERS AND ALLIES

Colaptes auratus—northern flicker

Melanerpes formicivorus—acorn woodpecker

Dryobates nuttallii—Nuttall's woodpecker

Wrens

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—rock wren
Troglodytes aedon—house wren
Thryomanes bewickii—Bewick's wren

New World Sparrows

PASSERELLIDAE—NEW WORLD SPARROWS

Aimophila ruficeps canescens—Southern California rufous-crowned sparrow
Aimophila ruficeps—rufous-crowned sparrow
Artemisiospiza belli—Bell's sparrow
Chondestes grammacus—lark sparrow
Melozone crissalis—California towhee
Passerculus sandwichensis—savannah sparrow
Pipilo maculatus—spotted towhee
Spizella breweri—Brewer's sparrow
Zonotrichia leucophrys—white-crowned sparrow

Typical Warblers, Parrotbills, and Wrentit

SYLVIIDAE—SYLVIID WARBLERS

Chamaea fasciata—wrentit

Mammals

Canids

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

Cats

FELIDAE—CATS

Lynx rufus—bobcat

Hares and Rabbits

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—desert cottontail

Sylvilagus bachmani—brush rabbit

Squirrels

SCIURIDAE—SQUIRRELS

Otospermophilus beecheyi—California ground squirrel

Reptiles

Lizards

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

Uta stansburiana—common side-blotched lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis hyperythra beldingi—Belding's orange-throated whiptail

Aspidoscelis tigris—tiger whiptail

Snakes

COLUBRIDAE—COLUBRID SNAKES

Coluber flagellum—coachwhip

Pituophis catenifer—gophersnake

VIPERIDAE—VIPERS

Crotalus ruber—red diamond rattlesnake

* signifies introduced (non-native) species

Appendix E

Special-Status Plant Species Potential to Occur

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/ 1B.1	None	Chaparral, coastal scrub, desert dunes; sandy/annual herb/(Jan)Mar–Sep/ 245–5,245	**Not expected to occur**. This species was not detected during the 2022 or 2023 focused surveys. The study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation; however, the study area is located slightly north of the species' known geographic range (CCH 2022). The nearest occurrence is approximately 12 miles from study area (CDFW 2022).
Allium marvinii	Yucaipa onion (also referred to as Marvin's Onion)	None/None/ 1B.2	Narrow Endemic Plant Species	Chaparral/perennial bulbiferous herb/Apr–May/ 2,490–3,490	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range, and suitable chaparral is present to support this species.
Arenaria lanuginosa var. *saxosa*	rock sandwort	None/None/ 2B.3	None	Subalpine coniferous forest, upper montane coniferous forest; mesic, sandy/perennial herb/July–Aug/4,770–8,530	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	None	Marshes and swamps; openings, sandy/perennial stoloniferous herb/May–Aug/ 10–560	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Astragalus hornii var. *hornii*	Horn's milk-vetch	None/None/ 1B.1	None	Meadows and seeps, playas; alkaline, lake margins/annual herb/May–Oct/195–2,785	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species.
Astragalus lentiginosus var. *coachellae*	Coachella Valley milk-vetch	FE/None/ 1B.2	None	Desert dunes, Sonoran desert scrub/annual/perennial herb/Feb–May/130–2,145	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species, and this species' geographic range is further

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
					east within the San Gorgonio Pass and Coachella Valley (CCH 2022).
Astragalus oocarpus	San Diego milk-vetch	None/None/ 1B.2	None	Chaparral, cismontane woodland/perennial herb/ May–Aug/1,000–5,000	**Not expected to occur.** While the study area is located within the species' known elevation range and suitable chaparral is present, this species is primarily restricted to the Palomar Mountains and Cleveland National Forest (CCH 2022). The nearest occurrence is isolated and from 1935 (CDFW 2022).
Astragalus pachypus var. *jaegeri*	Jaeger's milk-vetch	None/None/ 1B.1	Covered	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; rocky (sometimes), sandy (sometimes)/perennial shrub/ Dec–June/1,195–3,195	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused surveys. The study area is located within the species' known elevation range and contains suitable vegetation; however, the study area is located north of most known occurrences, with the nearest occurrences located in Beaumont and Banning (CCH 2022)
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE/None/ 1B.1	Criteria Area Survey Plant Species	Playas, valley and foothill grassland, vernal pools; alkaline/annual herb/ Apr–Aug/455–1,640	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Atriplex parishii	Parish's brittlescale	None/None/ 1B.1	Criteria Area Survey Plant Species	Chenopod scrub, playas, vernal pools; alkaline/annual herb/June–Oct/80–6,230	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/ 1B.2	Criteria Area Survey Plant Species	Coastal bluff scrub, coastal scrub; alkaline/annual herb/Apr–Oct/35–655	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Criteria Area Survey Plant Species	Chaparral, cismontane woodland, coastal scrub, riparian scrub; gravelly	**Not expected to occur.** This conspicuous evergreen shrub was not detected during the 2022 or 2023 focused surveys. Nearest

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
				(sometimes), sandy (sometimes)/perennial evergreen shrub/ (Feb)Mar–June/230–2,705	occurrences are not recent and at lower elevation than the study area (CDFW 2022). Suitable microhabitat requirements for the species include steep, north facing slopes or sandy washes, which are present within the study area.
Botrychium crenulatum	scalloped moonwort	None/None/ 2B.2	None	Bogs and fens, lower montane coniferous forest, marshes and swamps, meadows and seeps, upper montane coniferous forest/perennial rhizomatous herb/June–Sep/ 4,160–10,760	**Not expected to occur.** The study area is located outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Bouteloua trifida	three-awned grama	None/None/ 2B.3	None	Mojavean desert scrub/ perennial herb/ (Apr)May–Sep/2,295–6,560	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Criteria Area Survey Plant Species	Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; clay (often)/perennial bulbiferous herb/Mar–June/80–3,670	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and there are suitable grasslands present; however, the study area lacks vernal pools and clay soils. Nearest known occurrence is over 7 miles from the study area (CDFW 2022).
California macrophylla	round-leaved filaree	None/None/ CBR	Criteria Area Survey Plant Species	Cismontane woodland, valley and foothill grassland; clay/ annual herb/Mar–May/ 49–3,935	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. While the study area is located within the species' known elevation range and there is suitable vegetation present; the study area lacks suitable clay soils.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/ 1B.2	Criteria Area Survey Plant Species	Chaparral, lower montane coniferous forest, meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/ 2,325–7,840	**Not expected to occur.** While the study area contains suitable vegetation and is located within the species' known elevation range, the study area is located outside of the species' known geographic range, which is within the San Bernardino and San Gabriel Mountains (CCH 2022). Nearest occurrence is approximately 9 miles from the study area and was documented within the last 10 years, but most occurrences are over 25 miles from the study area and/or were documented more than 70 years ago (CDFW 2022).
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/ 1B.2	None	Chaparral, meadows and seeps, pebble (pavement) plain, riparian woodland, upper montane coniferous forest; mesic/annual herb (hemiparasitic)/May–Aug/ 4,265–7,840	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/ 1B.1	Criteria Area Survey Plant Species	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2,095	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and suitable vegetation is present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	None	Coastal dunes, marshes and swamps/annual herb (hemiparasitic)/ May–Oct (Nov)/0–100	**Not expected to occur.** The study area is located outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/ 1B.1	Covered	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland;	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
				openings, rocky (sometimes), Sandy (sometimes)/annual herb/Apr–June/900–4,000	is located within the species' known elevation range and suitable habitat is present. The nearest known occurrences are 3.5 miles to the northeast but they are isolated (CDFW 2022).
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/ 1B.2	Covered	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; clay (often)/annual herb/Apr–July/100–5,015	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and contains suitable vegetation; however, the study area is located north of species' known geographic range (CCH 2022). The nearest occurrence is approximately 15 miles south of the study area (CDFW 2022).
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/ 1B.2	None	Coastal scrub, Mojavean desert scrub, pinyon and juniper woodland; gravelly (sometimes), sandy (sometimes)/annual herb/ Apr–June/985–3,935	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and does contain suitable vegetation; however, the nearest known occurrence mapped was mapped within alluvial fan sage scrub (CDFW 2022), which is not present within the study area.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None/None/ 2B.2	None	Marshes and swamps/annual vine (parasitic)/July–Oct/ 50–920	**Not expected to occur.** The study area is located outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Deinandra mohavensis	Mojave tarplant	None/SE/ 1B.3	Covered	Chaparral, coastal scrub, riparian scrub; mesic/annual herb/(Jan–May) June–Oct/ 2,095–5,245	**Not expected to occur.** While the study area is located within the species' known elevation range and suitable vegetation (coastal scrub and chaparral) is present, this

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
					species' geographic range is more restricted to the San Jacinto Mountains (CCH 2022).
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Narrow Endemic Plant Species	Chaparral, cismontane woodland, coastal scrub; sandy/annual herb/ Apr–June/655–2,490	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and suitable vegetation is present; however, this species is more associated with gravelly benches and flood-deposited terraces and washes (CDFW 2022).
Dudleya multicaulis	many-stemmed dudleya	None/None/ 1B.2	Narrow Endemic Plant Species	Chaparral, coastal scrub, valley and foothill grassland; clay (often)/perennial herb/ Apr–July/50–2,590	**Not expected to occur.** This species was not detected during the April or May 2022 focused special-status plant surveys. While the study area is located within the species' known elevation range and there is suitable vegetation present, the study area is located north and east of the species' known geographic range (CCH 2022). The nearest mapped occurrence is approximately 25 miles west of the study area (CDFW 2022).
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE/SE/1B.1	Covered	Chaparral, coastal scrub; gravelly (sometimes), sandy (sometimes)/perennial herb/ Apr–Sep/300–2,000	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and there is suitable vegetation present. The nearest known occurrence is recent and greater than 5 miles from the study area (CDFW 2022). The species has a small range, is mainly associated with the Santa Ana River, and prefers a microhabitat containing sandy soils on river floodplains or terraced fluvial

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
					deposits, which are present in the study area (CDFW 2022).
Gilia leptantha ssp. *leptantha*	San Bernardino gilia	None/None/ 1B.3	None	Lower montane coniferous forest/annual herb/ June–Aug/4,920–8,395	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Heuchera parishii	Parish's alumroot	None/None/ 1B.3	None	Alpine boulder and rock field, lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; carbonate (sometimes), rocky/perennial rhizomatous herb/June–Aug/ 4,920–12,465	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/ 1B.1	None	Chaparral, cismontane woodland, coastal scrub; gravelly (sometimes), sandy (sometimes)/perennial herb/Feb–July (Sep)/ 230–2,655	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. While the study area is located within the species' known elevation range and contains suitable vegetation, the study area is located north and east of the species' known geographic range (CCH 2022). The nearest known occurrence is from 1921 and the species is listed as possibly extirpated (CDFW 2022).
Imperata brevifolia	California satintail	None/None/ 2B.1	None	Chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub; mesic/ perennial rhizomatous herb/ Sep–May/0–3,985	**Not expected to occur.** This conspicuous perennial rhizomatous herb was not detected during the 2022 or 2023 focused special-status plant surveys. While the study area is located within the species' known elevation range and there is suitable vegetation present, the nearest occurrences are greater than 5 miles from study area and are from 1988 and 1891 (CDFW 2022).

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
					Microhabitat is mesic sites, alkali seeps, and riparian areas.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/ 1B.1	Criteria Area Survey Plant Species	Marshes and swamps, playas, vernal pools/annual herb/ Feb–June/5–4,000	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation, playas, or vernal pools present to support this species.
Lilium parryi	lemon lily	None/None/ 1B.2	Covered	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic/ perennial bulbiferous herb/ July–Aug/4,000–9,005	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Malacothamnus parishii	Parish's bush-mallow	None/None/ 1A	None	Chaparral, coastal scrub/ perennial deciduous shrub/ June–July/1,000–1,490	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Mentzelia tricuspis	spiny-hair blazing star	None/None/ 2B.1	None	Mojavean desert scrub; gravelly, sandy, slopes, washes/annual herb/ Mar–May/490–4,195	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species.
Monardella macrantha ssp. *hallii*	Hall's monardella	None/None/ 1B.3	Covered	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/perennial rhizomatous herb/June–Oct/ 2,395–7,200	**Not expected to occur.** While the study area is located within the species' known elevation range and does contain grasslands, this species is more commonly found at higher elevations within the San Bernardino and San Jacinto Mountains (CCH 2022).
Nama stenocarpa	mud nama	None/None/ 2B.2	Criteria Area Survey Plant Species	Marshes and swamps/ annual/perennial herb/ Jan–July/15–1,640	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Navarretia fossalis	spreading navarretia	FT/None/ 1B.1	Narrow Endemic Plant Species	Chenopod scrub, marshes and swamps, playas, vernal pools/ annual herb/Apr–June/ 100–2,145	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present, playas, or vernal pools present to support this species.
Oxytropis oreophila var. *oreophila*	rock-loving oxytrope	None/None/ 2B.3	None	Alpine boulder and rock field, subalpine coniferous forest; gravelly (sometimes), rocky (sometimes)/perennial herb/ June–Sep/11,150–12,465	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Parnassia cirrata var. *cirrata*	San Bernardino grass-of-Parnassus	None/None/ 1B.3	None	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest; mesic, streambanks/ perennial herb/Aug–Sep/ 4,100–8,005	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Petalonyx linearis	narrow-leaf sandpaper-plant	None/None/ 2B.3	None	Mojavean desert scrub, Sonoran desert scrub; rocky (sometimes), sandy (sometimes)/perennial shrub/ (Jan–Feb) Mar–May (June–Dec)/-80–3,655	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present, and the study area is located west of the species' known geographic range (CCH 2022).
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/ 2B.2	None	Chaparral, cismontane woodland, coastal scrub, riparian woodland; gravelly, sandy/perennial herb/ (July)Aug–Nov (Dec)/0–6,885	**Not expected to occur.** This species was not detected during the September 2022 focused special-status plant survey. The nearest occurrence is over 15 miles from the study area (CDFW 2022). Micro habitat includes sandy, gravelly sites, which are present within the study area.
Pseudorontium cyathiferum	Deep Canyon snapdragon	None/None/ 2B.3	None	Sonoran desert scrub/annual herb/Feb–Apr/0–2,620	**Not expected to occur.** While the study area is located within the species' known elevation range, there is no suitable vegetation present to support this species.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Ribes divaricatum var. *parishii*	Parish's gooseberry	None/None/ 1A	None	Riparian woodland/perennial deciduous shrub/Feb–Apr/ 215–985	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.
Sidalcea hickmanii ssp. *parishii*	Parish's checkerbloom	None/SR/ 1B.2	None	Chaparral, cismontane woodland, lower montane coniferous forest/perennial herb/(May)June–Aug/ 3,280–8,195	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Sidalcea neomexicana	salt spring checkerbloom	None/None/ 2B.2	None	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/ perennial herb/Mar–June/50–5,015	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. The study area is located within the species' known elevation range and suitable vegetation is present; however, the site lacks alkaline soils. The nearest occurrence was documented within the last 15 years approximately 5 miles north of the study area (CDFW 2022).
Streptanthus campestris	southern jewelflower	None/None/ 1B.3	None	Chaparral, lower montane coniferous forest, pinyon and juniper woodland; rocky/ perennial herb/(Apr)May–July/ 2,950–7,545	**Not expected to occur.** The study area is located outside of the species' known elevation range.
Symphyotrichum defoliatum	San Bernardino aster	None/None/ 1B.2	None	Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland; streambanks/ perennial rhizomatous herb/July–Nov/ 5–6,690	**Not expected to occur.** This species was not detected during the September 2022 focused special-status plant survey. The study area is located within species' known elevation range, and the nearest occurrence is from 1951 and is unconfirmed (CDFW 2022). There are additional documented occurrences in San Bernardino and one occurrence documented within the Badlands

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	WR MSHCP	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
					(CDFW 2022). Microhabitat includes vernally mesic grassland or near ditches, streams, and springs, disturbed areas which are present within the study area.
Tortula californica	California screw moss	None/None/1 B.2	None	Chenopod scrub, valley and foothill grassland; sandy/ moss//35–4,790	**Not expected to occur.** This species was not detected during the 2022 or 2023 focused special-status plant surveys. There are a few known occurrences approximately 11 miles south of the study area (CDFW 2022); the study area is within the species' known elevation range and the study area supports sandy soil habitats.
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	None/None/2 B.1	Narrow Endemic Plant Species	Marshes and swamps, meadows and seeps, riparian forest, vernal pools; alkaline/ annual herb/May–Sep/ 15–1,425	**Not expected to occur.** The study area is located outside of the species' known elevation range, and there is no suitable vegetation present to support this species.

Notes: CRPR = California Rare Plant Rank; WR MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SE: State listed as endangered SR: State listed as rare
CRPR: California Rare Plant Rank
1A: Plants presumed extirpated in California and either rare or extinct elsewhere
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Threat Rank
0.1 – Seriously threatened in California (more than 80% of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

References

CCH (Consortium of California Herbaria). 2022. CCH2 Portal. Specimen Data from the Consortium of California Herbaria. Accessed October 2022. https://cch2.org/portal/index.php.

CDFW (California Department of Fish and Wildlife). 2022. RareFind 5, Version 5.2.14. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2022. https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

Appendix F

Special-Status Wildlife Potential to Occur

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Amphibians					
Rana muscosa	mountain yellow-legged frog	FE/SE, WL	Covered	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	**Not expected to occur.** No suitable habitat is present in the study area. The species is typically found near water and has disappeared from the majority of its known historical range in southern California. The closest CNDDB occurrence is mapped approximately 6 miles north of the study area, though this record is over 100 years old (CDFW 2023). An over 50-year-old record is mapped approximately 9 miles to the east of the study area (CDFW 2023).
Spea hammondii	western spadefoot	None/SSC	Covered	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Moderate potential to occur.** The study area contains suitable ephemeral water features in chaparral and valley–foothill woodlands habitat. The nearest mapped CNDDB occurrence is approximately 1 mile west of the study area, observed in 2015 (CDFW 2023).
Birds					
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Covered	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	**Not expected to occur.** Emergent wetlands or blackberry patches near freshwater are not present, and thus the study area would not support a nesting colony of this species. Woodland and grassland habitats are present and could be used for foraging. The nearest mapped CNDDB occurrence is approximately 1 mile southwest of the study area, observed in 2015 (CDFW 2023).
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land,	**Low potential to nest or winter; moderate potential to forage.** Golden eagles are an uncommon permanent resident and migrant throughout California, except in the central portion of the Central Valley. Open terrain, rugged terrain, and rolling foothills provide suitable habitat (CDFW

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
				open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	2023). However, there is only one mapped CNDDB occurrence in the six 7.5-minute USGS quadrangles area, which was an observation from 1980 (CDFW 2023). Additionally, the species would not be expected to occur near an urban/developed area such as is present immediately to the northeast of the study area.
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SC	Covered	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Low potential to occur**. The study area contains suitable open habitats for foraging, and suitably sized burrows were mapped within the study area. However, no burrowing owls or burrows with confirmed burrowing owl sign were detected during protocol surveys conducted in 2022 or 2023. The nearest known CNDDB occurrences are approximately 8 miles from the study area (CDFW 2023).
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Covered	Nests in open woodland and savanna, riparian areas, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Not expected to occur.** The study area is outside what is generally considered to be the current breeding range in California (CDFW 2023), but it does contain suitable foraging habitat for migratory individuals. The nearest CNDDB occurrence is approximately 13 miles away from the study area in San Bernardino; however, this is an undated occurrence and is noted as "possibly extirpated" (CDFW 2023).
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	None/SSC	Covered	Southern cactus scrub patches	**Not expected to occur.** The study area is outside of what is generally considered to be the current breeding range in California (CDFW 2023), and suitable cactus scrub patches are not present in the study area. One mapped CNDDB occurrence is approximately 10 miles away, from 2001, and is the lone occurrence east of the Santa Ana Mountains (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Circus hudsonius (nesting)	northern harrier	BCC/SSC	Covered	Nests in open wetlands (marshy meadows, wet lightly grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	**Observed on site; low potential to nest.** This species was observed in the study area and has a low potential to nest due to lack of marshy wetlands in the study area. There is suitable open disturbed land, grassland, and scrub habitat present to support foraging.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Covered	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Not expected to occur.** Wide riparian woodlands are not present to support this species. The species has become increasingly rare in the region and the study area is outside of the species' known current geographic range. The nearest CNDDB occurrence is mapped over 10 miles away, and most observations are >50 years old (CDFW 2023).
Cypseloides niger (nesting)	black swift	BCC/SSC	Covered	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	**Not expected to occur.** No suitable nesting habitat present, as the study area lacks moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons. The nearest CNDDB occurrence is approximately 12 miles northeast near Forest Falls (CDFW 2023).
Elanus leucurus (nesting)	white-tailed kite	None/FP	Covered	Nests in woodland, riparian areas, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Observed on site; moderate potential to nest.** This species was observed in the study area and has a moderate potential to nest within mature oak trees in the study area. There is suitable open disturbed land, grassland, and scrub habitat present to support foraging.

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	**Not expected to occur**. Dense and wide riparian woodlands are not present in the study area to support this species. The nearest CNDDB mapped occurrence is 3 miles west of the study area (CDFW 2023).
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Covered	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	**Not expected to occur.** Dense and wide riparian woodlands are not present in the study area. The nearest CNDDB mapped occurrence is 1 mile south of the study area, recorded in 2006 (CDFW 2023).
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Covered	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. However, the nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road, and all mapped occurrences within 10 miles are over 20 years old (CDFW 2023). Additionally, due to the species' tendency to perch conspicuously, loggerhead shrike likely would have been observed during surveys if present in the study area during the period in which surveys were conducted.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	**Low potential to occur.** The study area is at the northeastern corner of known geographic range. The project site contains minimal sage scrub and buckwheat scrub communities. The nearest CNDDB occurrence is mapped approximately 7 miles west of the study area (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Progne subis (nesting)	purple martin	None/SSC	Covered	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	**Not expected to occur.** The study area contains woodland habitat suitable for nesting and foraging. However, there are only two CNDDB occurrences nearby, approximately 5 and 10 miles away, and both historical, from 1910 and 1897, respectively (CDFW 2023). Most recent eBird sightings in the vicinity are during the migration season, so the species is expected to be a transient in the study area and is not expected to nest on site.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Covered	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Observed on site; low potential to nest**. This species was observed within the off-site portion of the study area; however, the project site contains minimal riparian and oak woodland vegetation that could support nesting for this species. The majority of the riparian habitat on the site is dominated by blue elderberry (*Sambucus mexicana*), which is not traditionally associated with this species (Lowther et al. 2020).
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Not expected to occur.** The study area lacks suitable dense and structured riparian canopy to support nesting of this species. The majority of the riparian habitat on the site is discontinuous and dominated by blue elderberry (*Sambucus mexicana*), which is not traditionally associated with this species (Kus et al. 2022). The nearest mapped CNDDB occurrence is approximately 1.5 miles southwest of the study area (CDFW 2023).
Xanthocephalus xanthocephalus (nesting)	yellow-headed blackbird	None/SSC	None	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open areas, croplands, and muddy shores of lacustrine habitat	**Not expected to occur.** The study area lacks suitable marsh and emergent vegetation. The nearest mapped CNDDB occurrence is from 1995, 13 miles south of the study area (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Fishes					
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/SCE	None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	**Not expected to occur.** The study area lacks suitable perennial surface water features.
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None/SSC	None	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	**Not expected to occur.** The study area is located outside of the geographic range for this species and lacks suitable perennial surface water features.
Mammals					
Antrozous pallidus	pallid bat	None/SSC	None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	**Low potential to occur**. The study area contains suitable grassland, shrubland, and woodland habitat that could support the foraging for this species. The study area lacks rocky outcrops or manmade structures for roosting; however, trees present could serve as roosting habitat. The nearest mapped CNDDB occurrence is approximately 5 miles northwest in Redlands but is a historical occurrence from 1935 (CDFW 2023).
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	**Moderate potential to occur.** The study area contains suitable coastal scrub, oak woodland, and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance-adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles east in Banning (CDFW 2023). This occurrence is at the edge of their mapped range and is from 1995.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Covered	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub,	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are mapped CNDDB occurrences overlapping the study area and

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
				pinyon–juniper, and annual grassland	multiple occurrences within 5 miles of the study area (CDFW 2023).
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	**Not expected to occur.** There is no suitable roosting habitat present in the study area. The nearest CNDDB occurrence is mapped approximately 9.5 miles south and was recorded in 1995 (CDFW 2023). There are occurrences mapped within the six 7.5-minute USGS quadrangles area.
Dasypterus xanthinus	western yellow bat	None/SSC	None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	**Not expected to occur.** The study area lacks suitable valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats. No roosting habitat is present within the site. There are nearby CNDDB occurrences, 2–5 miles away; however, the metadata of these occurrences state that it is not spatially accurate and therefore just associated with the region (CDFW 2023). These observations are also over 25 years old. The site is also slightly higher in elevation than the preferred habitat.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, SCE	Covered	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	**Not expected to occur.** The study area contains multiple incised channels with sandy and sparsely vegetated bottoms; however, Riversidean alluvial fan sage scrub is not present. Most local CNDDB occurrences are associated with the Santa Ana River floodplain (CDFW 2023).
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Covered	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	**Low potential to occur.** The study area contains suitable sparse grassland habitat in the study area; however, the study area is at the edge of the current geographic range for this species (USFWS 2023). The study area is outside of the range of known records, with the nearest mapped CNDDB occurrence being approximately 5 miles south of

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
					the study area, near Beaumont Nicklin (CDFW 2023).
Eumops perotis californicus	western mastiff bat	None/SSC	None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	**Low potential to occur.** The study area contains suitable chaparral and coastal scrub habitat that could support the foraging of this species. Additionally, the study area lacks crevices, rocky canyons, cliffs, and tunnel microhabitats for roosting, although trees could support roosting. The nearest CNDDB occurrence is approximately 9 miles southwest of the study area in Moreno Valley (CDFW 2023).
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC	Covered	Coniferous and deciduous forests, including riparian forests	**Not expected to occur.** The study area does not contain suitable forested habitat, and the woodland habitat present is fragmented. One CNDDB occurrence is mapped within the six 7.5-minute USGS quadrangles vicinity, approximately 10 miles northeast in the San Bernardino National Forest. Local CNDDB occurrences are all located in high elevations in the San Bernardino mountains (CDFW 2023).
Leptonycteris yerbabuenae	lesser long-nosed bat	FPD/SSC	None	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands	**Not expected to occur.** While the study area contains suitable oak woodland habitat, it lacks critical nectar, pollen, and fruit sources from agaves, saguaro, and organ pipe cactus. One CNDDB occurrence is mapped in the six 7.5-minute USGS quadrangles containing and surrounding the study area, observed in 1993. However, the occurrence likely represents a vagrant male during migration (CDFW 2023).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Covered	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	**Moderate potential to occur**. The species is most likely to occur in any areas with boulders/rocky areas within chaparral or coastal scrub habitat in the study area. The nearest CNDDB occurrence is approximately 4 miles north of the study area near Mentone (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	**Not expected to occur.** The study area lacks Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases habitats. Two CNDDB occurrences are mapped approximately 10 and 12 miles southwest and northwest of the study area, both from 1985. (CDFW 2022).
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	None	Grassland and sparse coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 4.5 miles south of the study area (CDFW 2023).
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Covered	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (NRCS 2022). The nearest CNDDB occurrence is approximately 4.5 miles southeast of the study area, recorded in 2016 (CDFW 2023).
Taxidea taxus	American badger	None/SSC	None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Moderate potential to occur**. The study area contains suitable dry, open, treeless areas, and grassland and coastal scrub habitat. Additionally, the study area contains burrows that have potential to support American badger. However, the six 7.5-minute USGS quadrangles containing and surrounding the study area contain one non-historic CNDDB occurrence, approximately 8.5 miles northeast, recorded in 1989 (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Reptiles					
Anniella stebbinsi	southern California legless lizard	None/SSC	None	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	**Moderate potential to occur**. The study area contains suitable dry washes, and valley–foothill, chaparral, oak woodland, and scrub habitat. Potential to occur in microhabitats with moist, loose soil within those areas. The most prominent soils series mapped in the area are described as sandy loam soils. The nearest CNDDB occurrence is a large non-specific area immediately north of the study area in Yucaipa (CDFW 2023).
Arizona elegans occidentalis	California glossy snake	None/SSC	None	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	**Moderate potential to occur**. The study area contains suitable grassland, scrub, and chaparral habitat with some open areas. Additionally, the most prominent soil series mapped in the area are described as generally loose, sandy loam soils (USDA 2022). The nearest CNDDB occurrence is approximately 8 miles north-northwest of the study area along Greenspot Road near the Santa Ana River (CDFW 2022).
Aspidoscelis tigris stejnegeri	coastal tiger whiptail	None/SSC	Covered	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas	**High potential to occur.** The study area contains suitable chaparral and woodland habitat. The nearest CNDDB occurrence is mapped 1 mile west of the study area (CDFW 2023).
Charina umbratica	southern rubber boa	None/ST	Covered	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	**Not expected to occur**. The eastern boundary of the study area is approximately 3.5 miles from CNDDB occurrences, which cover a large geographic area to the east and north of the study area, due to the records being displayed at the quadrangle level and not having specific locations because of concerns about poaching (CDFW 2022). The study area is well below the known elevation range of the species.

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Crotalus ruber	red diamondback rattlesnake	None/SSC	Covered	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	**Observed on site**. The study area contains suitable scrub, chaparral, and oak woodland habitat, and the species was observed within a burrow during a survey on April 27, 2022.
Emys marmorata	western pond turtle	None/SSC	Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	**Not expected to occur.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by stormwater runoff from foothills within the study area.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Moderate potential to occur**. The study area contains suitable scrub, chaparral, and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence since 1975 is approximately 3.5 miles south of the study area, where one adult was observed (CDFW 2022).
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	**Moderate potential to occur**. The study area contains suitable shrubby coastal scrub and chaparral vegetation in addition to small mammal burrows. The nearest CNDDB occurrence is approximately 1 mile west of the study area near San Timoteo Road (CDFW 2022).
Thamnophis hammondii	two-striped gartersnake	None/SSC	None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	**Not expected to occur.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by stormwater runoff from adjacent mountains.

Scientific Name	Common Name	Status (Federal/State)	MSHCP	Habitat	Potential to Occur
Invertebrates					
Bombus crotchii	Crotch's bumble bee	None/SC	None	Open grassland and scrub communities supporting suitable floral resources	**Moderate potential to occur.** The study area contains open grassland and floral resources during the spring months. A *Bombus* sp. was incidentally observed during 2022 surveys and *B. crotchii* has been documented in 2020 in the region of the project site (Richardson 2023).

Notes: MSHCP = Multiple Species Habitat Conservation Plan; CNDDB = California Natural Diversity Database; USGS = U.S. Geological Survey.
Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
FPD: Federally proposed for delisting
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
State
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State listed as endangered
ST: State listed as threatened
SC: State candidate for listing as threatened or endangered
SCE: State candidate for listing as endangered

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Appendix G

Aquatic Resources Delineation Report

DRAFT

Aquatic Resources Delineation Report

Mesa Verde Specific Plan Area 2 Amendment 2

SEPTEMBER 2024

Prepared for:

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APPENDICES

A Request for a Jurisdictional Determination
B Antecedent Precipitation Tool Output
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D Review Area Photographs

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
CDFW	California Department of Fish and Wildlife
EPA	U.S. Environmental Protection Agency
HUC	Hydrologic Unit Code
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers

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1 Introduction

This aquatic resource delineation report (report) was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This report presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Mesa Verde Specific Plan Area 2 Amendment 2 Project (Project) located in Calimesa, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter–Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively defined as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This report presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. A request for a USACE Approved Jurisdictional Determination is provided in Appendix A.[1]

1.2 Contact Information

Contact information for the Project Applicant and agent are provided in Table 1.[2] Access to the review area is not restricted, but if a site visit is requested, the Project Applicant or agent will accompany regulatory staff to the review area.[3] Mesa Verde LLC is the Project Applicant and landowner.

Table 1. Contact Information

Project Applicant	Mesa Verde Owners, LLC	**Agent**	Dudek
Contact Name	David Graves	**Contact Name**	Anna Cassady
Address	18565 Jamboree Road, Suite 200 Irvine, California 92612	**Address**	605 Third Street, Encinitas, California 92024
Phone	949.417.1396	**Phone**	951.300.1088
Email	dgraves@shopoff.com	**Email**	acassady@dudek.com

1 Minimum Standards Item 1 (Request for Jurisdictional Determination).
2 Minimum Standards Item 2 (Contact Information).
3 Minimum Standards Item 3 (Site Access Statement).

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2 Review Area Description and Landscape Setting[4]

The approximately 1,475.8-acre review area for the proposed Project is located in Calimesa, California. The review area is in Township 2 South, Range 2 West, Sections 8, 9, 14, 15, 16, 17, 22, and 23. The review area consists of 20 parcels, which are listed in Table 2 (Figure 1, Project Location).[5]

Regional access to the review area is provided via Interstate 10 at the Sandalwood Drive exit (Exit 88) in Calimesa. Turning west onto Sandalwood Drive and following it for 0.25 miles leads to the eastern end of the review area.[6]

Table 2. List of Assessor's Parcel Numbers within the Study Area

Riverside County							
411210010	411210028	413030025	413040013	413040014	413040017	413040018	413040020
413040023	413050009	413050010	413050012	413160011	413200003	413200040	413200042
413200044	413200048	—	—	—	—	—	—
San Bernardino County							
30121108	30121102	—	—	—	—	—	—

2.1 Geology and Topography

The review area is located just north of San Timoteo Canyon and north of the Badlands. North of the review area is the City of Yucaipa and the foothills of San Bernardino National Forest.

While trails intersect the majority of the review area, the southwestern portion of the area is subject to the highest disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails have formed) and several debris piles. The review area's surface elevation ranges between approximately 2,000 and 2,300 feet above mean sea level and gently slopes from the eastern and western sides towards the center of the review area where the primary drainage flows southwest towards San Timoteo Creek.

2.2 Soils[7]

Thirty soil complexes are mapped within the review area (USDA 2023a), as listed in Table 3 and depicted in Figure 2, Soils. There are four soil series are rated as partially hydric, noted in Table 3 with gray shading. The Badland series consists of unweathered bedrock on concave surfaces with very high runoff. The Metz series consists of somewhat excessively drained soils formed in alluvium derived from sedimentary rock. The Placentia

4 Minimum Standards Item 10 (Description of Existing Field Conditions).
5 Minimum Standards Item 14 (Site Location Map).
6 Minimum Standards Item 4 (Directions).
7 Minimum Standards Item 13 (Soil Descriptions).

series consists of moderately well–drained soils formed in alluvium derived from granite. The Tujunga series consists of excessively drained soils formed in sandy alluvium derived from granite.

Table 3. Soils within the Study Area

Soil Name	Hydric Rating	Acreage
Badland	Partially Hydric	432.5
Buren Loam, 5 to 15 Percent Slopes, Severely Eroded	Not Hydric	17.4
Gorgonio Gravelly Loamy Fine Sand, 2 to 15 Percent Slopes	Not Hydric	5.6
Greenfield Sandy Loam, 15 to 25 Percent Slopes, Eroded	Not Hydric	13.7
Greenfield Sandy Loam, 2 to 8 Percent Slopes, Eroded	Not Hydric	16.9
Hanford Coarse Sandy Loam, 2 to 8 Percent Slopes	Not Hydric	62.3
Hanford Coarse Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	7.8
Metz Loamy Sand, Channeled, 0 to 15 Percent Slopes	Partially Hydric	0.8
Placentia Fine Sandy Loam, 0 to 5 Percent Slopes	Partially Hydric	3.9
Placentia Fine Sandy Loam, 5 to 15 Percent Slopes	Partially Hydric	0.7
Ramona Sandy Loam, 0 to 5 Percent Slopes, Severely Eroded	Not Hydric	2.1
Ramona Sandy Loam, 2 to 5 Percent Slopes, Eroded	Not Hydric	4.3
Ramona Sandy Loam, 2 to 9 Percent Slopes	Not Hydric	1.2
Ramona Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	<0.1
Ramona Sandy Loam, 8 to 15 Percent Slopes, Severely Eroded	Not Hydric	45.2
Ramona Sandy Loam, 9 to 15 Percent Slopes	Not Hydric	0.8
Ramona Sandy Loam, Moderately Deep, 15 to 25 Percent Slopes, Severely Eroded	Not Hydric	8.2
Ramona Sandy Loam, Moderately Deep, 8 to 15 Percent Slopes, Eroded	Not Hydric	172.9
Ramona Very Fine Sandy Loam, 0 to 8 Percent Slopes, Eroded	Not Hydric	21.1
Ramona Very Fine Sandy Loam, Moderately Deep, 0 to 8 Percent Slopes, Eroded	Not Hydric	54.0
San Emigdio Fine Sandy Loam, 2 to 8 Percent Slopes, Eroded	Not Hydric	102.5
San Emigdio Fine Sandy Loam, 2 to 9 Percent Slopes	Not Hydric	2.0
San Emigdio Fine Sandy Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	9.9
San Emigdio Loam, 8 to 15 Percent Slopes, Eroded	Not Hydric	24.1
San Emigdio Sandy Loam, 9 to 15 Percent Slopes	Not Hydric	0.1
San Timoteo Loam, 25 to 50 Percent Slopes, Eroded	Not Hydric	280.1
San Timoteo loam, 30 to 50 percent slopes, eroded	Not Hydric	5.0
San Timoteo Loam, 8 to 25 Percent Slopes, Eroded	Not Hydric	95.0
Saugus Sandy Loam, 30 to 50 Percent Slopes	Not Hydric	6.3
Terrace Escarpments	Not Hydric	46.0
Tujunga Loamy Sand, Channeled, 0 to 8 Percent Slopes	Partially Hydric	34.6
	Total	**1,475.8**

Note: Shaded rows indicate hydric soils (USDA 2023b).

2.3 Vegetation

A total of 33 vegetation communities were mapped in the review area within the following 7 land cover types: grass and herb dominated, chaparral, riparian, scrub, woodland, unvegetated, and disturbed and developed. The acreages of the mapped vegetation alliances/associations and other land covers in the review area are presented in Table 4.

Table 4. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Grass and Herb Dominated						
Non-native grassland general habitat	Non-native grassland	Non-native grassland	SNA	412.3	243.2	655.5
Needle grass–melic grass grassland[3]	*Nassella* spp.–*Melica* spp.	*Nassella pulchra–Avena* spp.–*Bromus* spp.	S3	0.6	0	0.6
Russian thistle–dyer's woad–fivehood bassia fields	*Salsola tragus–Isatis tinctoria–Bassia* spp. [pending]	*Salsola* spp.	SNA	0.6	0	0.6
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum* (*elongatum, nudum*)	*Corethrogyne filaginifolia*	S4	30.0	0	30.0
Upland mustards or star-thistle fields	*Brassica nigra–Centaurea* (*solstitialis, melitensis*)	*Hirschfeldia incana*	SNA	12.6	0	12.6
			Grass and Herb Dominated Subtotal	*456.1*	*243.2*	*699.3*
Chaparral						
Chamise chaparral	*Adenostoma fasciculatum*	*Adenostoma fasciculatum*	S5	44.4	445.5	489.8
		Adenostoma fasciculatum–(Ceanothus tomentosus)	S5	3.4	21.0	24.4
		Adenostoma fasciculatum–(Lotus scoparius–Eriodictyon spp.*)*	S5	1.6	2.6	4.2
		Adenostoma fasciculatum–Eriogonum fasciculatum	S4	5.7	0.2	6.0
Chamise–sage chaparral	*Adenostoma fasciculatum–Salvia* spp.	*Adenostoma fasciculatum–Salvia mellifera*	S4	0	5.5	5.5
		Adenostoma fasciculatum – Salvia mellifera – Ceanothus crassifolius	S4	3.1	0	3.1
		Adenostoma fasciculatum–Salvia mellifera – Rhus ovata[3]	S3	0.1	0.3	0.4
Eastwood manzanita chaparral[3]	*Arctostaphylos glandulosa*	*Arctostaphylos glandulosa–Adenostoma fasciculatum–Quercus wislizeni*	S3	1.6	0	1.6

Table 4. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Hairy leaf–woolly leaf ceanothus chaparral[3]	*Ceanothus (oliganthus, tomentosus)*	*Ceanothus tomentosus*	S3	0.1	3.6	3.7
Hoary leaf ceanothus chaparral	*Ceanothus crassifolius*	*Ceanothus crassifolius– Adenostoma fasciculatum–Salvia mellifera*	S4	0	0.6	0.6
Scrub oak chaparral	*Quercus berberidifolia*	*Quercus berberidifolia–Adenostoma fasciculatum*	S4	6.8	0.9	7.7
Sugarbush chaparral[3]	*Rhus ovata*	*Rhus ovata*	S3	7.0	3.3	10.3
			Chaparral Subtotal	*73.7*	*483.6*	*557.3*
Riparian						
Arroyo willow thickets[3]	*Salix lasiolepis*	*Salix lasiolepis*	S3	0.1	0	0.1
Basket bush–river hawthorn –desert olive patches[3]	*Rhus trilobata–Crataegus rivularis– Forestiera pubescens*	*Sambucus nigra*	S3	2.0	0	2.0
			Riparian Subtotal	*2.2*	*0*	*2.2*
Scrub						
Black sage scrub	*Salvia mellifera*	*Salvia mellifera*	S4	2.6	0	2.6
		Salvia mellifera–Eriogonum fasciculatum/Bromus rubens	S4	0.5	0	0.5
Brittle bush scrub	*Encelia farinosa*	*Encelia farinosa*	S4	10.2	1.6	11.8
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp.	*Malacothamnus fasciculatus*	S4	20.0	16.1	36.1
Bush penstemon scrub[3]	*Keckiella antirrhinoides*	*Keckiella antirrhinoides*	S3	2.1	0.3	2.4
California buckwheat scrub	*Eriogonum fasciculatum*	*Eriogonum fasciculatum*	S5	17.5	0	17.5
		Eriogonum fasciculatum–Encelia farinosa	S5	0.1	0	0.1
California sagebrush–(purple sage) scrub	*Artemisia californica–(Salvia leucophylla)*	*Artemisia californica–Lotus scoparius*	S5	1.0	0	1.0

Table 4. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Alliance[1]	Association	State Ranking[2]	Acreage		
				Unburned	Burned	Total
Deer weed–silver lupine–yerba santa scrub	*Lotus scoparius–Lupinus albifrons– Eriodictyon* spp.	*Lotus scoparius*	S5	6.3	2.0	8.3
			Scrub Subtotal	*60.3*	*20.0*	*80.3*
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia*	*Quercus agrifolia*	S5	21.7	15.1	36.7
			Woodland Subtotal	*21.7*	*15.1*	*36.7*
Unvegetated Wash and River Bottom						
Unvegetated wash and river bottom	NA		SNA	18.2	0.1	18.3
			Unvegetated Subtotal	*18.2*	*0.1*	*18.3*
Disturbed and Developed						
Urban/Developed	NA		SNA	17.5	0	17.5
Disturbed Habitat	NA		SNA	44.0	0	44.0
Ornamental Plantings	NA		SNA	4.3	15.9	20.2
			Disturbed and Developed Subtotal	*65.9*	*15.9*	*81.8*
			Grand Total	**698.0**	**777.8**	**1,475.8**

Notes: Totals may not sum precisely due to rounding.

1 The term "semi-natural stands" vs. alliance is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009).

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers and abbreviations have the following meanings (NatureServe 2023): 1 = critically imperiled
2 = imperiled3 = vulnerable to extirpation or extinction 4 = apparently secure 5 = demonstrably widespread, abundant, and secure
NA = not applicable
SNA = state ranking not assigned

3 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023c).

2.4 Watershed/Hydrology

The review area is within the Yucaipa Creek subwatershed, Hydrologic Unit Code (HUC) 12 – 180702030402, and the San Timoteo Canyon–San Timoteo Wash subwatershed HUC 12 – 180702030403, which lie within the Santa Ana subbasin (Figure 3A, Watersheds). The Yucaipa Creek subwatershed is 45.6 square miles (29,266 acres) and contains Yucaipa Creek. Wilson Creek and Oak Glen Creek are also prominent features in the watershed, both flowing into Yucaipa Creek. Yucaipa Creek flows west and north through several downstream features before converging with the Santa Ana River. The Santa Ana River flows south and west, terminating at the Pacific Ocean. The San Timoteo Canyon-San Timoteo Wash subwatershed is 47.9 square miles (30,633 acres) and contains San Timoteo Wash. This subwatershed collects water from Calimesa and the south side of San Timoteo Canyon. San Timoteo Wash flows west to join the Santa Ana River, which drains south and west to the Pacific Ocean.

Figure 3B, Hydrology, shows the U.S. Geological Survey National Hydrography Dataset "blue-line streams" (USGS 2023) and the National Wetlands Inventory data (USFWS 2023) present within the review area.

The review area occurs entirely within the State Water Resources Control Board Water Quality Control Plan for the Santa Ana River Basin (SWRCB 1995); within the San Ana River watershed (Santa Ana River Hydrologic Unit 801.00); San Timoteo Hydrologic Area (801.60); and the Yucaipa, San Timoteo, and Beaumont Management Zones (801.61 and 801.62) (SRWCB 1995).

2.5 Review Area Alterations, Current and Past Land Use

The review area predominantly encompasses open space but is intersected by incised drainages and numerous dirt roads. The majority of the review area burned in 2017 and 2019 during the Palmer and Sandalwood Fires, respectively. Evidence of motor vehicle off-roading is present throughout the review area.

The review area is located south of a water treatment facility operated by Yucaipa Valley Water District and open space functioning as existing agricultural operations. To the east lies Mesa View Middle School, Interstate 10, and commercial and residential development. To the west and south is undeveloped open space associated with the northern portion of San Timoteo Canyon.

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3 Precipitation Data and Analysis[8]

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter-than-normal period (USACE 2020). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (NOAA 2021) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2020).

Table 5 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 5, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
06/02/2022	Extreme Drought	Dry Season	12	Normal
06/15/2022	Extreme Drought	Dry Season	12	Normal
06/16/2022	Extreme Drought	Dry Season	12	Normal

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition.

Additionally, according to the U.S. Department of Agriculture's Agricultural Applied Climate Information System (USDA 2022), the area around the review area receives an average of 12.76 inches of precipitation annually.

8 Minimum Standards Item 11 (Discussion of Hydrology).

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4 Investigation Methods[9]

The jurisdictional delineation was conducted by Dudek biologists on May 3, 2022, and June 3, 15, and 16, 2022 (Table 6). Prior to conducting the jurisdictional delineation, the U.S. Fish and Wildlife Service's National Wetland Inventory data (USFWS 2021) was reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands; several areas supporting hydrophytic vegetation were also assessed for the presence of wetland hydrology and hydric soils to determine whether they were three-parameter wetlands. Jurisdictional boundaries were mapped in the field using Esri Collector on a mobile device. Remote sensing was not used for the delineation.

Table 6. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
5/3/2022	10:00 AM–4:00 PM	Anna Cassady, Britney Schultz	55°F–72°F; 0%–70% cloud cover; 1–2 mph wind
6/3/2022	8:30 AM–3:45 PM	Britney Schultz, Callie Amoaku	62°F–81°F; 0%–10% cloud cover; 0–2 mph wind
6/15/2022	8:30 AM–3:32 PM	Dylan Ayers, Olivia Koziel	76°F–94°F; 0% cloud cover; 0–3 mph wind
6/15/2022	8:46 AM–2:03 PM	Callie Amoaku, Kimberly Narel	76°F–91°F; 0% cloud cover; 0–1 mph wind
6/16/2022	8:40 AM–2:10 PM	Callie Amoaku, Kimberly Narel	76°F–90°F; 0% cloud cover; 0–8 mph wind
	9:05 AM–12:57 PM	Dylan Ayers, Eilleen Salas	81°F–90°F; 0% cloud cover; 0–3 mph wind

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). 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 (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters (NWWs) were delineated on topographical maps in conjunction with Esri Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual.

Wetland Determination Forms were taken at certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present; hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative

[9] Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods).

cross-sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix C.

4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). NWWs are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

5 Aquatic Resource Narrative[10]

5.1 Waters of the United States (USACE)

On August 29, 2023, the U.S. Environmental Protection Agency (EPA) and USACE announced the final rule amending the 2023 definition of "waters of the United States," conforming with the *Sackett v. EPA* decision. Some of the key changes include removing the significant nexus test from consideration when identifying tributaries and other waters as federally protected and revising the adjacency test when identifying federally jurisdictional wetlands. Under EPA's new "waters of the United States" definition, a water of the United States is a relatively permanent, standing, or continuously flowing body of water that has an apparent surface connection to a traditionally navigable water. No features within the review area contain relatively permanent waters that connect to a traditionally navigable water. To date, USACE has determined that ephemeral waters are not jurisdictional. Therefore, the review area does not contain waters of the United States.

5.2 Waters of the State (RWQCB)

Approximately 4.94 acres of non-wetland waters, 0.04 acres of culverts, and no wetlands potentially regulated by the RWQCB are present in the review area (Figure 4, Potential Aquatic Resources Overview).[11] Table 7 provides a detailed summary of aquatic resources delineated within the review area. Table 7 also includes a description of each feature identified within the review area; its Cowardin type, if available (Cowardin et al. 1979; USACE 2022); any OHWM indicators present; the location; and the acreage/linear feet. Photos of the potential aquatic features delineated within the review area and additional areas reviewed for the presence of these resources are provided in Appendix D.[12] The locations of these photos are shown in the Figure 4 series (Figures 4A–4G).

These features are subject to regulation by the RWQCB under Section 401 of the Clean Water Act.

NWW-1 and NWW-1A

NWW-1 and NWW-1A are located in the extreme southwest corner of the review area (Figure 4B). NWW-1A is a tributary to NWW-1 and flows from the northeast to the southeast. NWW-1 flows from the east to the west. Both NWW-1 and NWW-1A eventually flow into San Timoteo Wash, which flows into the Santa Ana River and then into the Pacific Ocean. OHWM Form T-04_DA, which represents NWW-1, has the following OHWM indicators: (1) shelving, (2) break in slope at OHWM, (3) scour, and (4) bed and banks. The OHWM within the transect was approximately 4 feet across and the transect length was 40 feet. Below the OHWM the soil texture was predominantly sand and gravel, and above the OHWM the soil texture was predominantly clay/silt and sand. Below the OHWM the vegetation cover was 100% herbaceous, and above the OHWM the shrub cover was 20% and the herbaceous cover was 80%. The upland species were red brome (*Bromus rubens*) and slender oat (*Avena barbata*), and the bank species were red brome, slender oat, and California buckwheat (*Eriogonum fasciculatum*); there were no emergent species. The drainages were dry during the delineation, and dirt bike impacts and cattle grazing were noted as impacts in the area.

10 Minimum Standards Item 6 (Aquatic Resource Narrative).
11 Minimum Standards Item 16 (Delineation Maps).
12 Minimum Standards Item 17 (Ground Photos).

NWW-2

NWW-2 is in the southwest portion of the review area southeast of NWW-1 (Figure 4B). It flows north to south and eventually flows into San Timoteo Wash, which flows into the Santa Ana River and then into the Pacific Ocean. OHWM Form T-05_DA, which represents NWW-2, has the following OHWM indicators: (1) break in slope at OHWM, (2) scour, and (3) bed and banks. The OHWM within the transect was approximately 3 feet across and the transect length was 30 feet. Below the OHWM the soil texture was predominantly sand and clay/silt, and above the OHWM the soil texture was predominantly clay/silt and sand. Below the OHWM the vegetation cover was 10% shrub, 60% herbaceous, and 40% bare and above the OHWM the vegetation cover was 20% shrub, 80% herbaceous, and 20% bare. The upland species were red brome, slender oat, shortpod mustard (*Hirschfeldia incana*) and the bank species were red brome, slender oat, shortpod mustard, and California buckwheat; there were no emergent species. The drainage was dry during the delineation. It was clear that the site had been burned in the past. Other disturbances included vehicles and cattle.

NWW-3

NWW-3 is in the northwest portion of the review area (Figure 4A). NWW-3 flows southwest to northeast. The drainage flows approximately 1,655 feet and then dissipates adjacent to a dirt road. There are no signs of hydrology downstream. However, based on the topography, it is presumed that this drainage once connected to a tributary to Yucaipa Creek, which flows into San Timoteo Wash and into the Santa Ana River, and then into the Pacific Ocean; therefore, it is considered a potential jurisdictional water of the United States. OHWM Form T-01_DA, which represents NWW-3, has the following OHWM indicators: (1) changes in the character of soil, (2) break in slope at OHWM, and (3) bed and banks. The OHWM within the transect was approximately 5 feet across and the transect length was 80 feet. Below the OHWM the soil texture was predominantly sand and gravel, and above the OHWM the soil texture was predominantly clay/silt and sand. Below the OHWM the vegetation cover was 100% herbaceous, and above the OHWM the vegetation cover was 100% herbaceous. The upland species were bromes (*Bromus* spp.) and oats (*Avena* spp.), and the bank species were the same; there were no emergent species. The drainage was dry during the delineation. Disturbances included a nearby dirt road, cattle grazing, and mowing.

NWW-4

NWW-4 is in the western portion of the review area (Figure 4A). NWW-4 flows west, then southwest, then west, and then northwest, creating a U shape. The drainage flows for 3,818 feet and dissipates adjacent to a dirt road. There are no signs of hydrology downstream. However, based on the topography and existing U.S. Geological Survey National Hydrography Dataset data, it is presumed that this drainage once connected to a tributary to Yucaipa Creek, which flows into San Timoteo Wash and into the Santa Ana River, and then into the Pacific Ocean; therefore, it is considered a potential jurisdictional water of the United States. OHWM Form T-09_DA, which represents NWW-4, has the following OHWM indicators: (1) break in slope at OHWM and (2) bed and banks. The OHWM within the transect was approximately 3 feet across and the transect length was 25 feet. Below and above the OHWM the soil texture was predominantly clay/silt. Below the OHWM the vegetation cover was 70% herbaceous and 30% bare, and above the OHWM the vegetation cover was 100% herbaceous. The upland species were ripgut brome (*Bromus diandrus*) and slender oat and the bank species were the same; there were no emergent species. The drainage was dry during the delineation. Disturbances included a nearby dirt road and cattle grazing.

NWW-5, NWW-5A, NWW-5B, and NWW-5C

NWW-5, NWW-5A, NWW-5B, and NWW-5C are in the central portion of the review area (Figures 4C, 4D, 4E, and 4F). NWW-5A originates in the review area just west of 7th Place Road in an off-site road improvement associated with the Project. It flows west (off site) and then onto the review area. Once the feature is within the review area, it flows from northeast to southwest until it joins both NWW-5B and NWW-5. NWW-5B flows into NWW-5 from the east. NWW-5B flows from the northeast to the southwest then flows from east to west until it merges with NWW-5. NWW-5 flows from the northeast to the southeast off site. NWW-5 eventually flows into San Timoteo Wash, which flows into the Santa Ana River and then into the Pacific Ocean. NWW-5C flows into NWW-5A; NWW-5C generally flows east to west. OHWM Form T-10_CA_KN, which represents NWW-5C, has the following OHWM indicators: (1) natural line impressed on bank, (2) vegetation absent, (3) break in slope at OHWM, (4) bed and banks, and (5) change in plant community and/or cover. The OHWM within the transect was approximately 3 feet across. Below the OHWM the vegetation cover was 100% bare ground, and above the OHWM the vegetation cover was 1% to 5% shrub, 75+% herbaceous, and 5% to 15% bare. The upland species were ripgut brome, other bromes (*Bromus* spp.), and shortpod mustard; there were no bank species or emergent species. The drainage was dry during the delineation. The drainage was a deeply incised, narrow, meandering channel. OHWM Form T-10_DA, which represents NWW-5A, has the following OHWM indicators: (1) natural line impressed on bank, (2) vegetation absent. (3) break in slope at OHWM, (4) bed and banks, and (5) change in plant community and/or cover. Below the OHWM the soil texture was predominantly sand, gravel, and cobbles, and above the OHWM the soil texture was predominantly clay/silt. Below the OHWM the vegetation cover was 20% herbaceous and 80% bare ground, and above the OHWM the vegetation cover was 20% tree and 100% herbaceous. The upland species were ripgut brome, slender oat, chamise (*Adenostoma fasciculatum*), and oak (*Quercus* spp.); the bank species were the same, and there were no emergent species. The drainage was dry during the delineation. There were signs of trash dumping, vehicle use, and cattle use. OHWM Form T-01_CA_BS, which represents NWW-5B, has the following OHWM indicators: (1) natural line impressed on bank, (2) wracking, (3) break in slope at OHWM, (4) bed and banks, and (5) absence of vegetation. Below the OHWM the vegetation cover was 1% to 5% herbaceous, 25% to 50% bare ground, and 25% to 75% tree canopy, and above the OHWM the vegetation cover was 5% to 15% shrub and 50% to 75% herbaceous. The upland species were non-native herbaceous species and California buckwheat. The bank species were tree of heaven (*Ailanthus altissima*), arroyo willow (*Salix lasiolepis*), and sugar bush (*Rhus ovata*). There were no emergent species. The drainage was dry during the delineation.

NWW-6

NWW-6 is located in the south-central portion of the review area, just south of NWW-5 and just north of the review area boundary (Figure 4D). NWW-6 flows northeast to southwest and eventually off site. NWW-6 eventually flows into the San Timoteo Wash, which flows into the Santa Ana River and then into the Pacific Ocean. There are no OHWM forms for this feature.

NWW-7

NWW-7 is an upstream continuation of NWW-6. It is located in the south-central portion of the site (Figure 4D). The drainage flows for 489 feet and dissipates into chaparral. There are no signs of hydrology downstream. However, based on the topography and existing U.S. Geological Survey National Hydrography Dataset data, it is presumed that this drainage once connected to a tributary that flows into San Timoteo Wash and into the Santa Ana River, and then into the Pacific Ocean; therefore, it is considered a potential jurisdictional water of the United States. OHWM Form T-08_CA_KN, which represents NWW-7, has the following OHWM indicators: (1) changes in the character of soil, (2) sediment sorting, and (3) bed and banks. The OHWM within the transect was approximately 3 feet across. Below

the OHWM the soil texture was predominantly sand and cobbles, and above the OHWM the soil texture was predominantly sand, cobbles, and boulders. Below the OHWM the vegetation cover was 75%+ herbaceous, 5% shrub, and 5% bare; above the OHWM the shrub cover was 15% to 20%, the herbaceous cover was 75%+, and bare cover was 5%. The upland species were chamise, bush mallow (*Malacothamnus fasciculatus*), and skunkbush sumac (*Rhus aromatica*), and the bank species were deer weed (*Acmispon glaber*), dwarf brodiaea (*Brodiaea terrestris*), and common fiddleneck (*Amsinckia intermedia*); there were no emergent species. The bottom of the drainage was sandy.

NWW-8, NWW-8A, NWW-8A-CUL, NWW-8B, NWW-8C, NWW-8D, NWW-8E, NWW-8F, NWW-8G, and NWW-8H

NWW-8, NWW-8A, NWW-8B, and NWW-8C are one contiguous drainage in the eastern portion of the review area, and NWW-8D is a tributary to this feature. NWW-8A-CUL is a culvert under Sandalwood Drive. NWW-8E, NWW-8F, NWW-8G, and NWW-8H flow into NWW-8D. All these drainages generally flow northeast to southwest and eventually flow off site into Garden Air Wash (Figures 4E, 4F, and 4G). Garden Air Wash flows into San Timoteo Wash and into the Santa Ana River, and then into the Pacific Ocean. OHWM Form T-02_CA_BS, which represents NWW-8C, has the following OHWM indicators: (1) natural line impressed on the bank, (2) vegetation absent, (3) change in plant community cover, and (4) bed and banks. The OHWM within the transect was approximately 5 feet across. Below the OHWM the vegetation cover was 75% to 100% bare and 1% to 5% herbaceous, and above the OHWM the tree cover was 15% to 25%, the shrub cover was 15% to 25%, and the herbaceous cover was 50% to 75%. The upland species were red brome, ripgut brome, shortpod mustard, and coast live oak (*Quercus agrifolia*) and the bank species were ripgut brome, shortpod mustard, and Mexican elderberry (*Sambucus mexicana*); there were no emergent species. The drainages were dry during the delineation and deeply incised, with vertical banks.

NWW-9

NWW-9 flows from the northeast to the southwest adjacent to NWW-8 along an existing dirt road for 1,004 feet and then stops, and there are no signs of hydrology. However, just on the other side of the dirt road, NWW-9 picks up again and the feature eventually flows off site (Figure 4G). There are no OHWM forms for this feature.

NWW-10

NWW-10 is on the eastern portion of the review area (Figures 4F and 4G). NWW-10 generally flows north to south through a culvert across Sandalwood Drive. OHWM Form T-04_CA_BS, which represents NWW-10, has the following OHWM indicators: (1) natural line impressed on bank, (2) break in slope at OHWM, and (3) bed and banks. The OHWM within the transect was approximately 6 feet across. Below the OHWM the vegetation cover was 75% to 100% herbaceous; above the OHWM, the shrub cover was 5% to 15% and the herbaceous cover was 75% to 100%. The upland species were red brome, ripgut brome, shortpod mustard, slender oat, and sugar bush, and the bank species were ripgut brome, red brome, slender oat, and shortpod mustard; there were no emergent species. The drainage was dry during the delineation.

Table 7. RWQCB Aquatic Resource Summary for the Review Area[13]

Feature Name	Cowardin[1]	OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/ Linear Feet
Non-Wetland Waters				
NWW-1	R6 – Riverine ephemeral	SHEL, BBS, SCOUR, and B&B	33.9954676738/ −17.111339495	0.23/2,541
NWW-1A	R6 – Riverine ephemeral	BBS and CPC	33.9959573944/ −117.109432973	0.04/601
NWW-2	R6 – Riverine ephemeral	BBS, SCOUR, and B&B	33.9947632561/ −117.105786506	0.01/199
NWW-3	R6 – Riverine ephemeral	CAST, BBS, and B&B	34.0005562348/ −117.103654963	0.17/1,655
NWW-4	R6 – Riverine ephemeral	BBS and B&B	33.9999482389/ −117.097508031	0.16/1,824
NWW-5	R6 – Riverine ephemeral	SHEL, BBS, SCOUR, W, B&B, VA, and CPC	33.992073249/ −117.092225195	1.49/4,068
NWW-5A	R6 – Riverine ephemeral	NLIB, VA, BBS, and CPC	33.9976687702/ −117.081911877	1.08/3,290
NWW-5B	R6 – Riverine ephemeral	NLIB, W, BBS, B&B, and VA	33.9947251564/ −117.081035302	0.59/5,324
NWW-5C	R6 – Riverine ephemeral	NLIB, VA, BBS, B&B, and CPC	33.9997893458/ −117.077793592	0.08/1,016
NWW-6	R6 – Riverine ephemeral	BBS and CPC	33.9917775795/ −117.089544388	0.07/893
NWW-7	R6 – Riverine ephemeral	CAST, SS, and B&B	33.990615663/ −117.085651658	0.03/486
NWW-8	R6 – Riverine ephemeral	BBS and CPC	33.9877157639/ −117.07432926	0.25/2,593
NWW-8A	R6 – Riverine ephemeral	BBS and CPC	33.9921887161/ −117.068385344	<0.01/48
NWW-8B	R6 – Riverine ephemeral	BBS and CPC	33.9932256501/ −117.066402341	0.11/967
NWW-8C	R6 – Riverine ephemeral	NLIB, VA, CPC, and B&B	33.9952285444/ −117.064732277	0.12/1,021
NWW-8D	R6 – Riverine ephemeral	BBS and CPC	33.9942155221/ −117.06385741	0.16/1,344
NWW-8E	R6 – Riverine ephemeral	BBS and CPC	33.9950510914/ −117.062851569	0.02/322
NWW-8F	R6 – Riverine ephemeral	BBS and CPC	33.995162999/ −117.061659856	0.03/272
NWW-8G	R6 – Riverine ephemeral	BBS and CPC	33.9944881467/ −117.061885954	0.03/236
NWW-8H	R6 – Riverine ephemeral	BBS and CPC	33.994394051/ −117.062205187	0.03/254

[13] Minimum Standards Item 9 (Table Listing All Aquatic Resources).

Table 7. RWQCB Aquatic Resource Summary for the Review Area[13]

Feature Name	Cowardin[1]	OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/ Linear Feet
NWW-9	R6 – Riverine ephemeral	BBS, B&B, VA, and CPC	33.9881758156/ −117.075471756	0.08/1,321
NWW-10	R6 – Riverine ephemeral	NLIB, BBS, and B&B	33.9902179435/ −117.062522797	0.13/991
			Non-Wetland Waters Subtotal	*4.94/31,266*
Culverts				
NWW-5B-CUL	R6 – Riverine ephemeral	N/A	33.9972151075/ −117.069324856	*0.01/131*
NWW-8A-CUL	R6 – Riverine ephemeral	N/A	33.9972151075/ −117.069324856	0.01/284
NWW-10-CUL	R6 – Riverine ephemeral	N/A	33.9914404466/ −117.062304694	0.02/402
			Culverts Subtotal	*0.04/817*
			Total	**4.98/32,083**

Notes: Totals may not sum due to rounding.
OHWM = ordinary high-water mark; NWW = non-wetland water; N/A = not applicable; SHEL = shelving; SCOUR = scour; B&B= bed and banks; NLIB = natural line impressed on bank; VA = vegetation absent; CPC = change in plant community and/or cover; SS = sediment sorting; W = wracking; CAST = change in average sediment texture; BBS = break in bank slope.
[1] Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2022).

5.3 CDFW Jurisdiction

All features described in Section 5.1 have been identified as streambed potentially regulated by CDFW. Because CDFW regulates from bank to bank, certain portions of the review area where the top of a channel bank extended beyond the OHWM are subject to regulation by CDFW as streambed. These areas are displayed in the Figure 4 series. The full extent of CDFW jurisdictional areas is those described in Table 8.

Table 8. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Latitude/Longitude	Acres
Streambed		
NWW-1	33.9954676738/−117.111339495	1.08/2,541
NWW-1A	33.9959573944/−117.109432973	0.13/601
NWW-2	33.9947632561/−117.105786506	0.05/199
NWW-3	34.0005562348/−117.103654963	0.45/1,655
NWW-4	33.9999482389/−117.097508031	0.49/1,824
NWW-5	33.992073249/−117.092225195	6.04/4,068
NWW-5A	33.9976687702/−117.081911877	3.65/3,290
NWW-5B	33.9947251564/−117.081035302	2.83/5,324
NWW-5C	33.9997893458/−117.077793592	0.08/1,016
NWW-6	33.9917775795/−117.089544388	0.07/893

Table 8. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Latitude/Longitude	Acres
NWW-7	33.990615663/−117.085651658	0.07/486
NWW-8	33.9877157639/−117.07432926	0.44/2,593
NWW-8A	33.9921887161/−117.068385344	<0.01/48
NWW-8B	33.9932256501/−117.066402341	0.68/967
NWW-8C	33.9952285444/−117.064732277	0.64/1,021
NWW-8D	33.9942155221/−117.06385741	0.73/1,344
NWW-8E	33.9950510914/−117.062851569	0.17/322
NWW-8F	33.995162999/−117.061659856	0.11/272
NWW-8G	33.9944881467/−117.061885954	0.13/236
NWW-8H	33.994394051/−117.062205187	0.11/254
NWW-9	33.9881758156/−117.075471756	0.20/1,321
NWW-10	33.9902179435/−117.062522797	0.16/991
	Streambed Subtotal	*18.30/31,266*
Culverts		
NWW-5B-CUL	33.9923760809/−117.067893602	0.01/131
NWW-8A-CUL	33.9972151075/−117.069324856	0.01/284
NWW-10-CUL	33.9914404466/−117.062304694	0.02/402
	Streambed Subtotal	*0.04/817*
Riparian		
RIP	33.9971217867/−117.069724154	0.05/140
	Riparian Subtotal	*0.05/140*
	Total	**18.40/32,222**

Notes: CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.

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6 Results and Conclusions

Based on the jurisdictional aquatic resource delineation and review of relevant information provided in this aquatic resources delineation report, no features within the review area contain a continuous surface connection to a traditionally navigable water. To date, USACE has determined that ephemeral waters are not jurisdictional. Therefore, the review area does not contain waters of the United States. A total of 4.94 acres of non-wetland waters of the state and 0.04 acres of culverts potentially regulated by RWQCB were delineated within the review area. No wetlands were delineated within the review area. These features may also be regulated by CDFW. A total of 18.40 acres of CDFW streambed (below and above the OHWM, to top of bank), culverts, associated riparian habitat, and swales occur within the review area.

This report can be used by those agencies to determine if they would regulate the features described herein. The geographic information system (GIS) data for the delineation is provided digitally. [14]

[14] Minimum Standards Item 20 (Digital Data).

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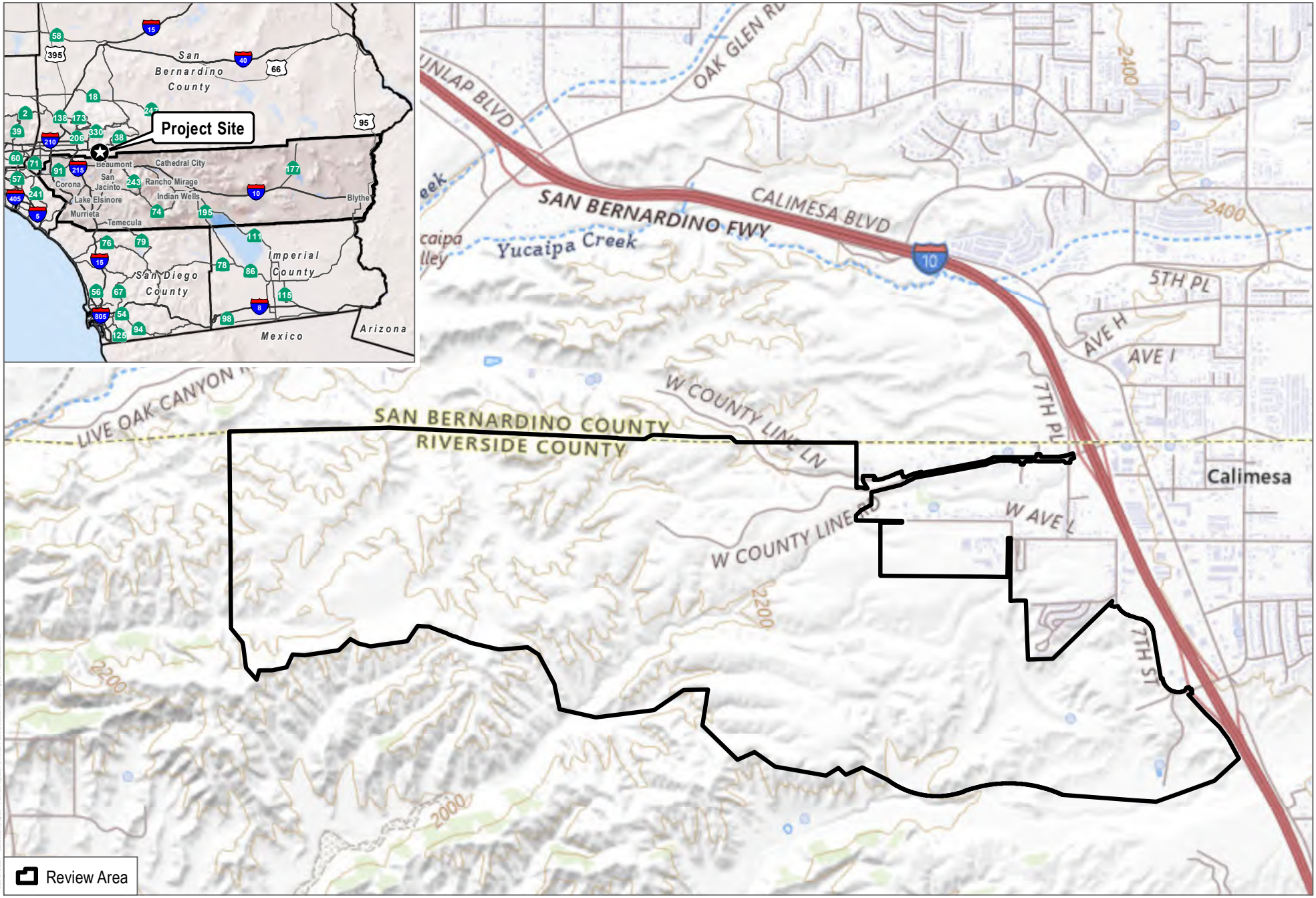

SOURCE: USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles;
Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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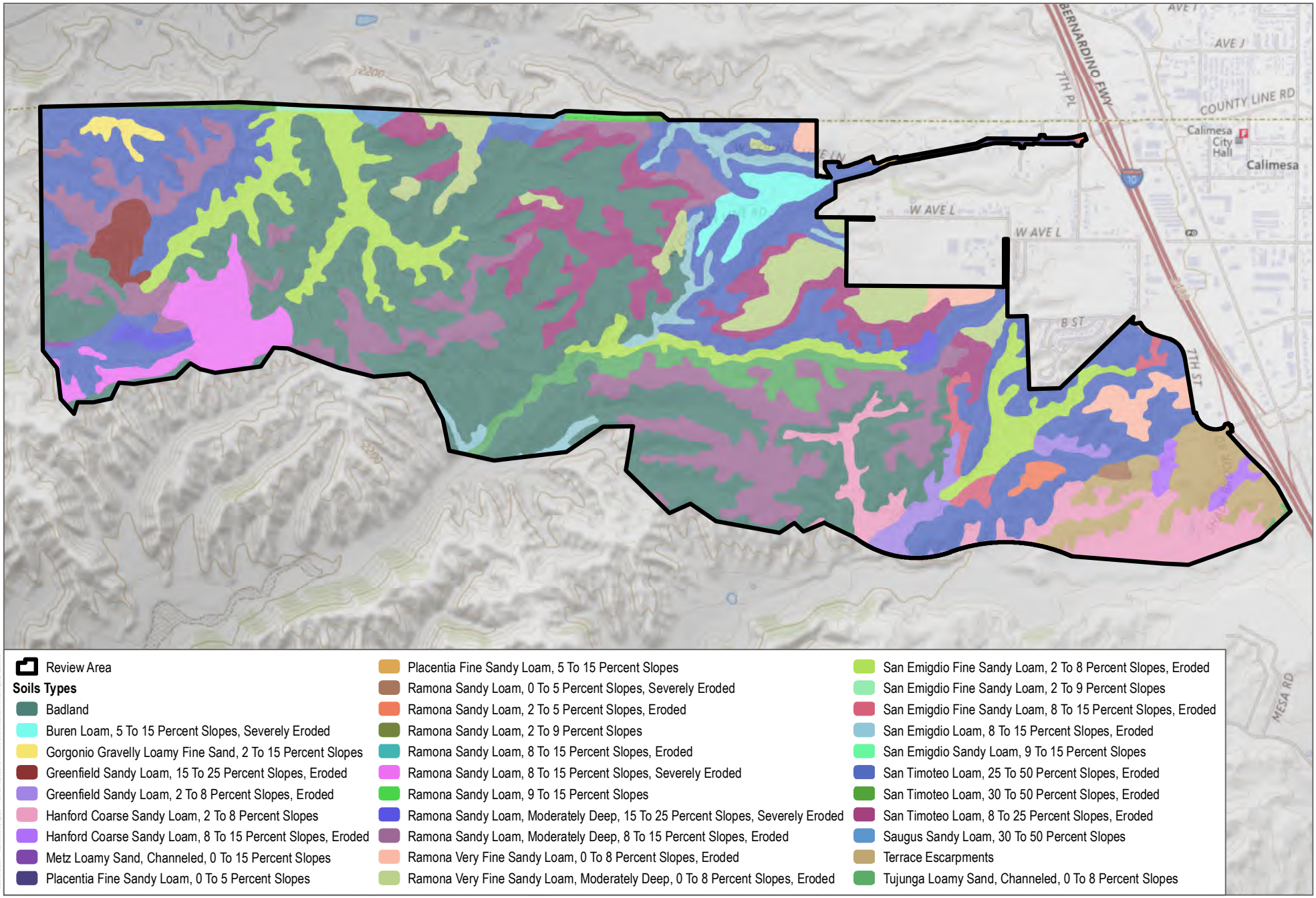

SOURCE: USDA NRCS; Riverside County; USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles;
Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

DUDEK

0 1,000 2,000 Feet

FIGURE 2

Soils

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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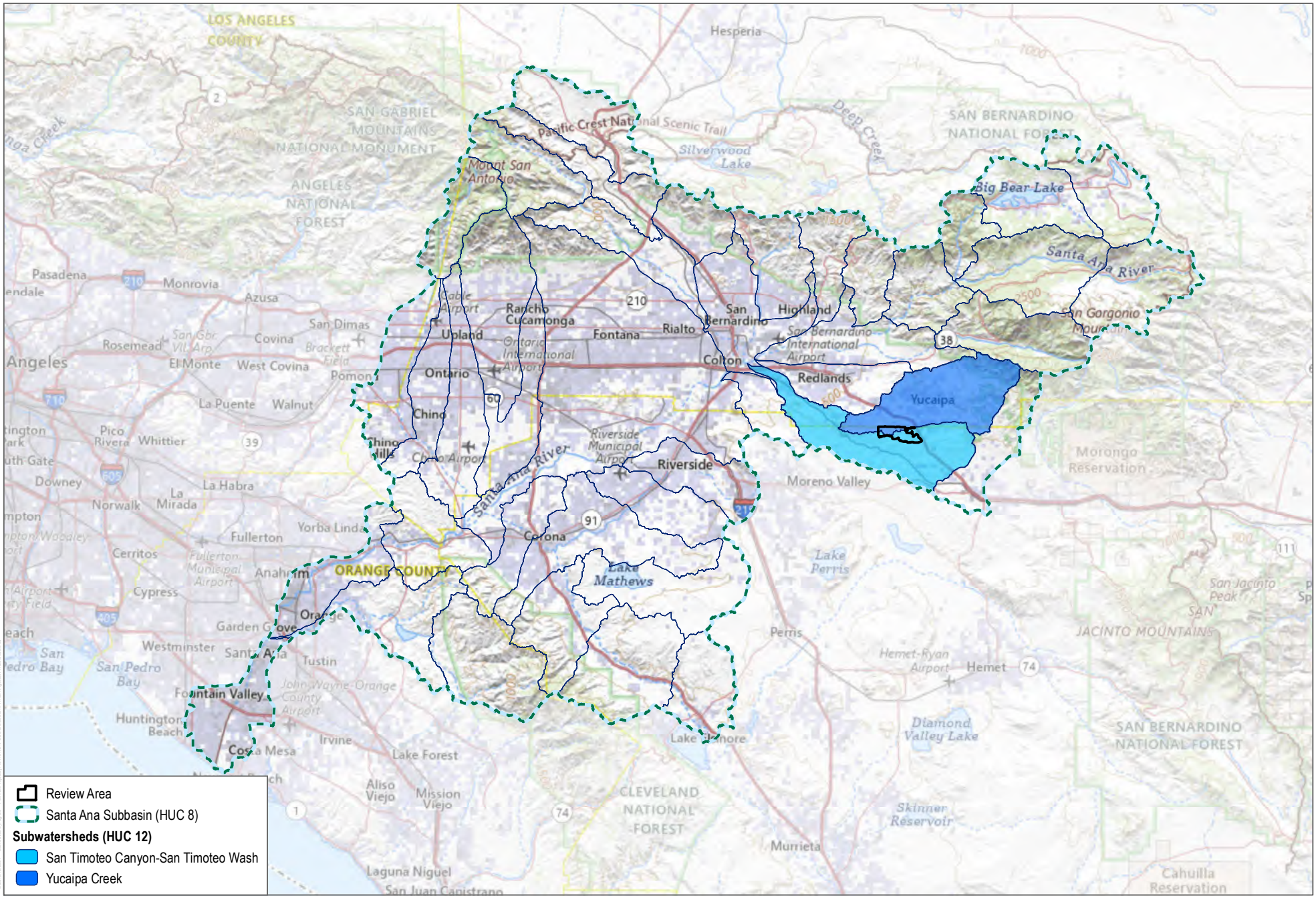

SOURCE: USGS NHD; USGS National Topo Maps

FIGURE 3A

Watersheds

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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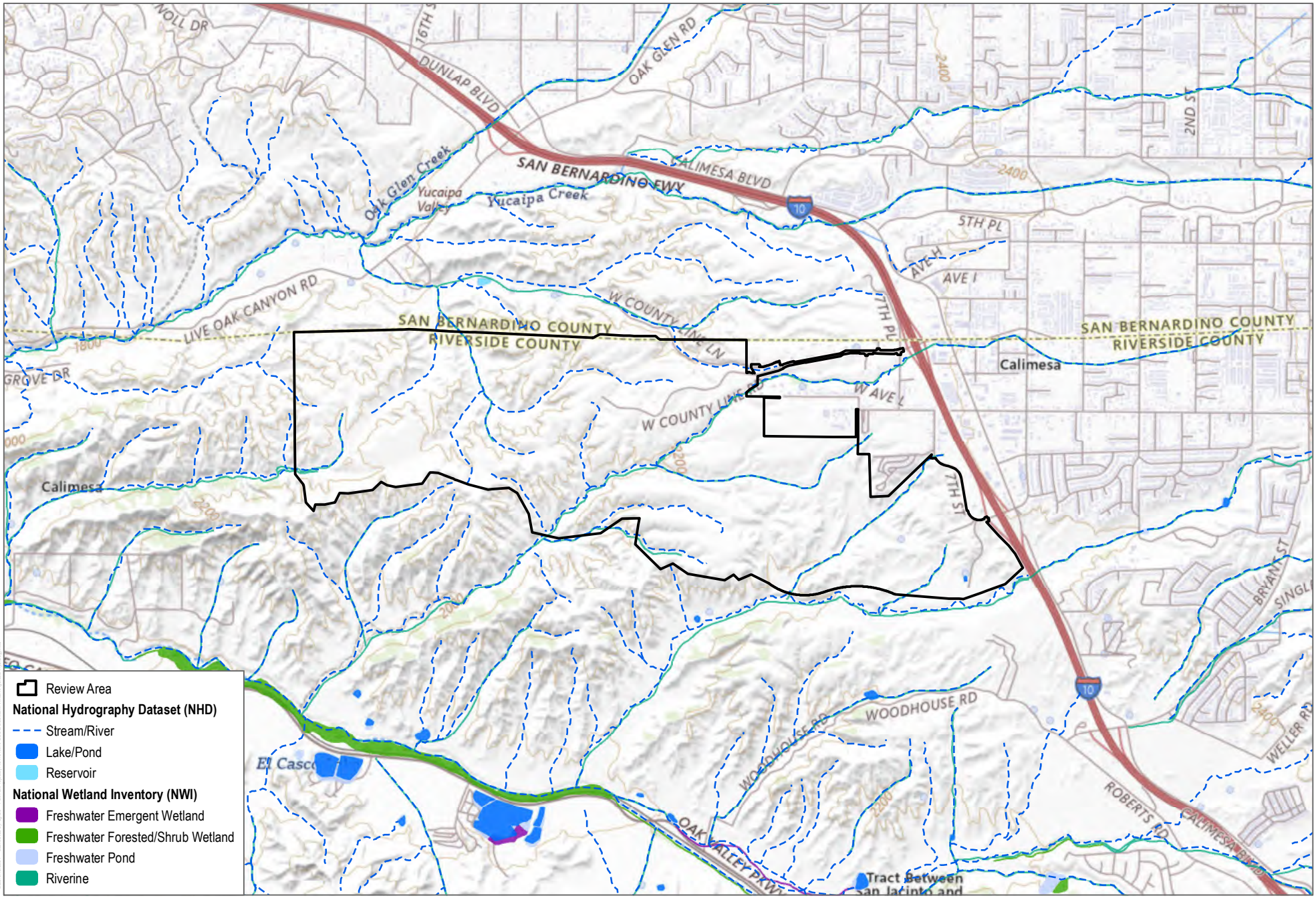

SOURCE: USGS NHD; USFWS NWU; USGS National Topo Maps

DUDEK

0 0.5 1 Miles

FIGURE 3B

Hydrology

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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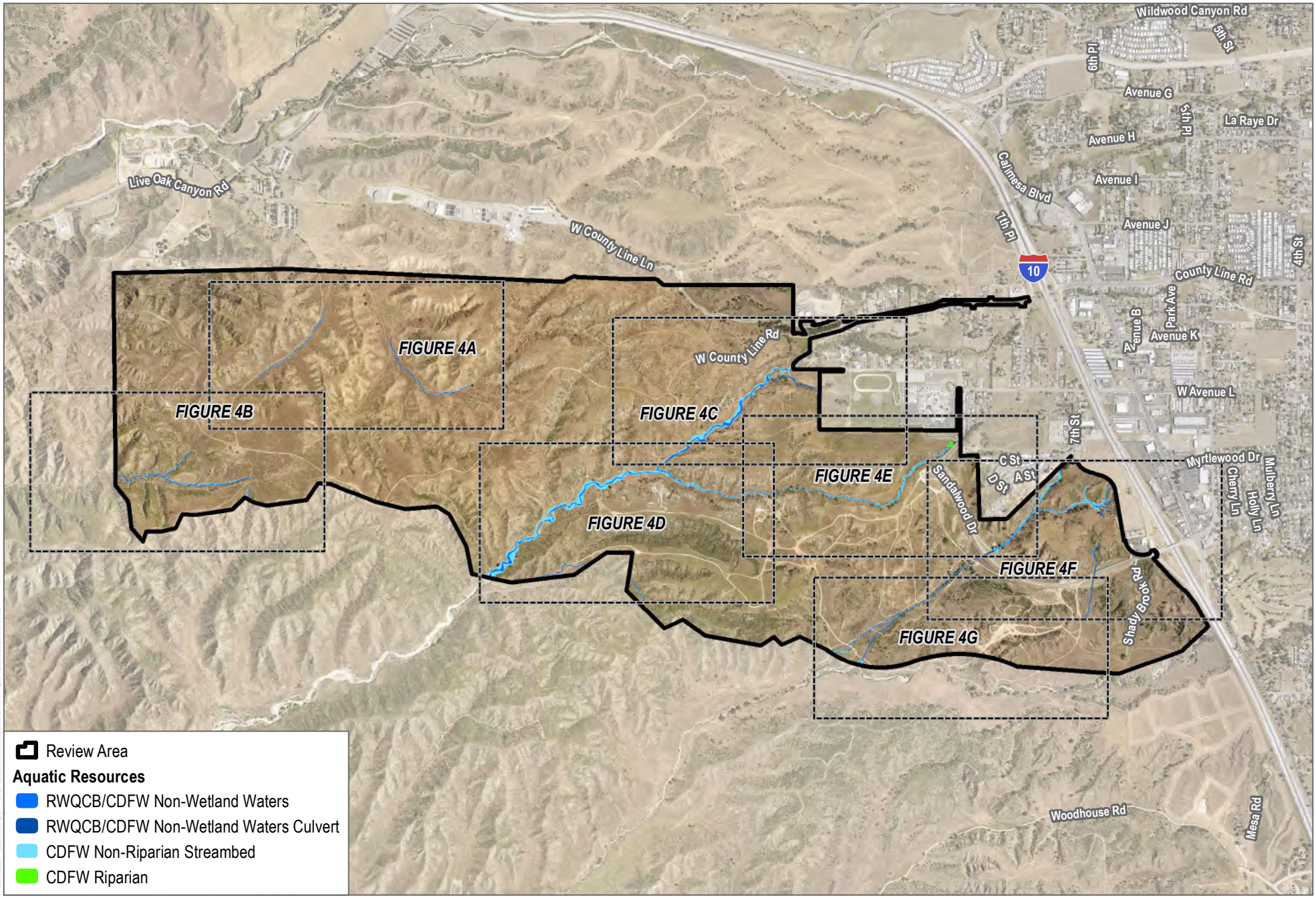

SOURCE: Riverside County; Open Street Map

DUDEK

0 1,000 2,000 Feet

FIGURE 4

Potential Aquatic Resources Overview

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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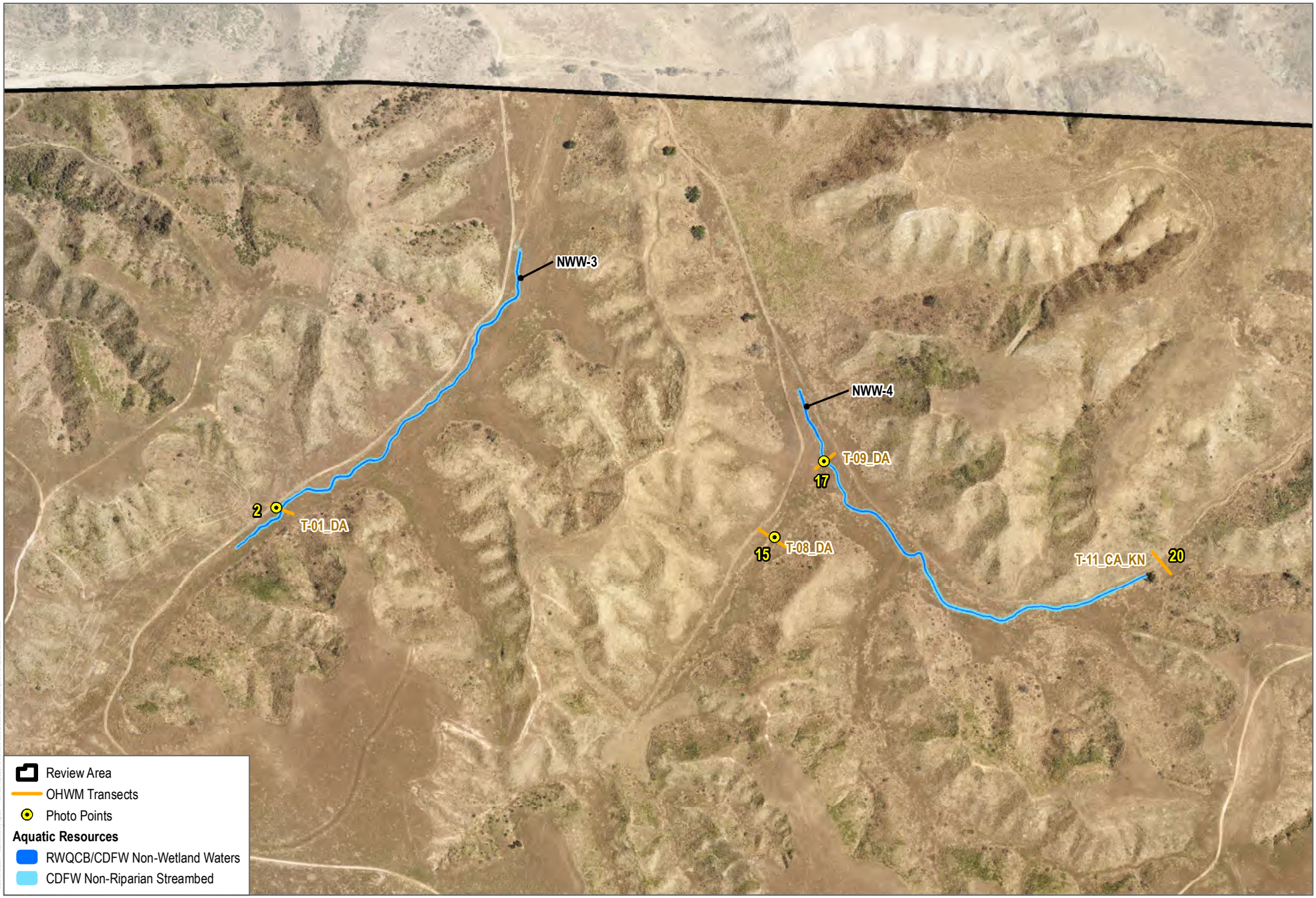

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4A

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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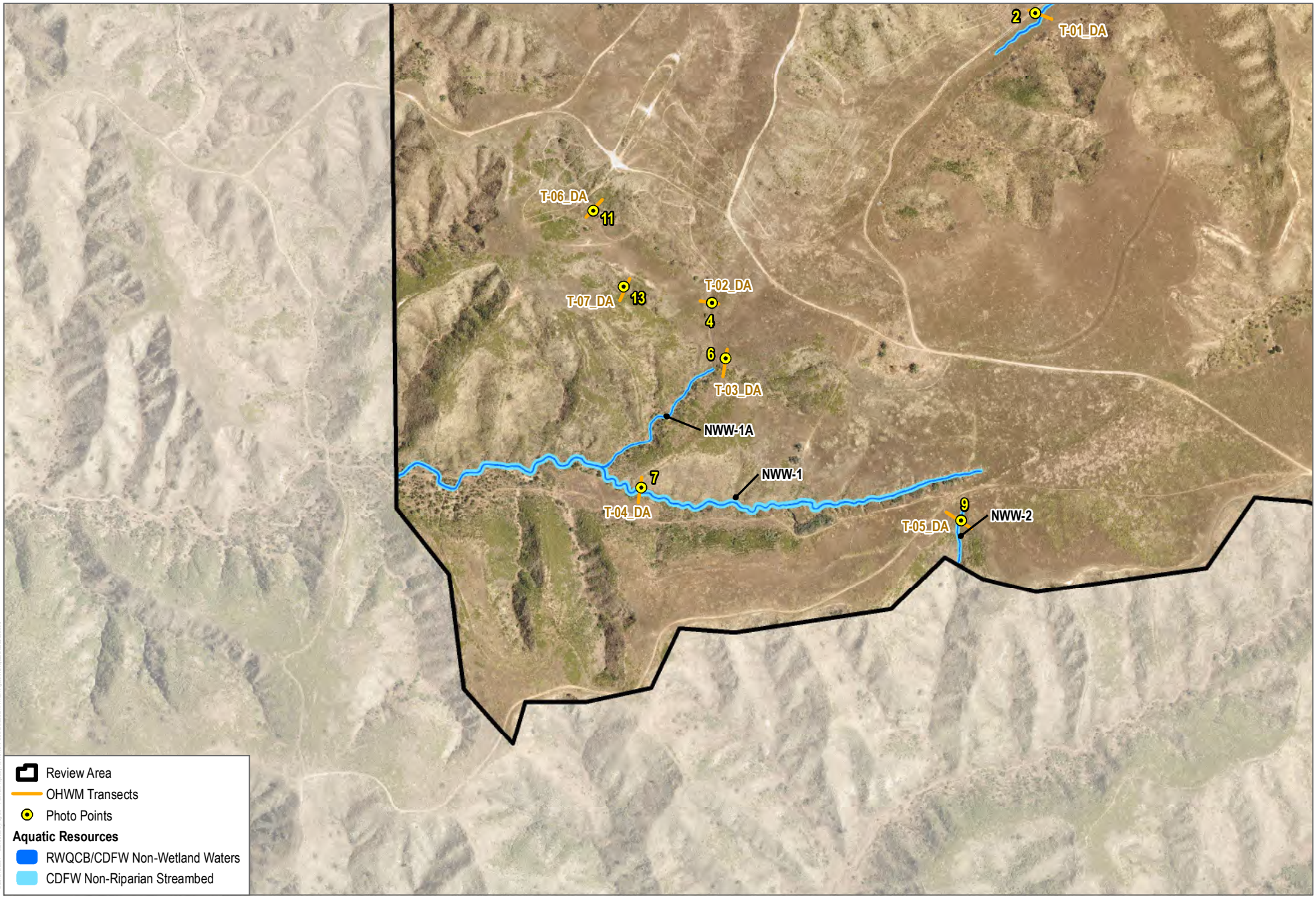

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4B

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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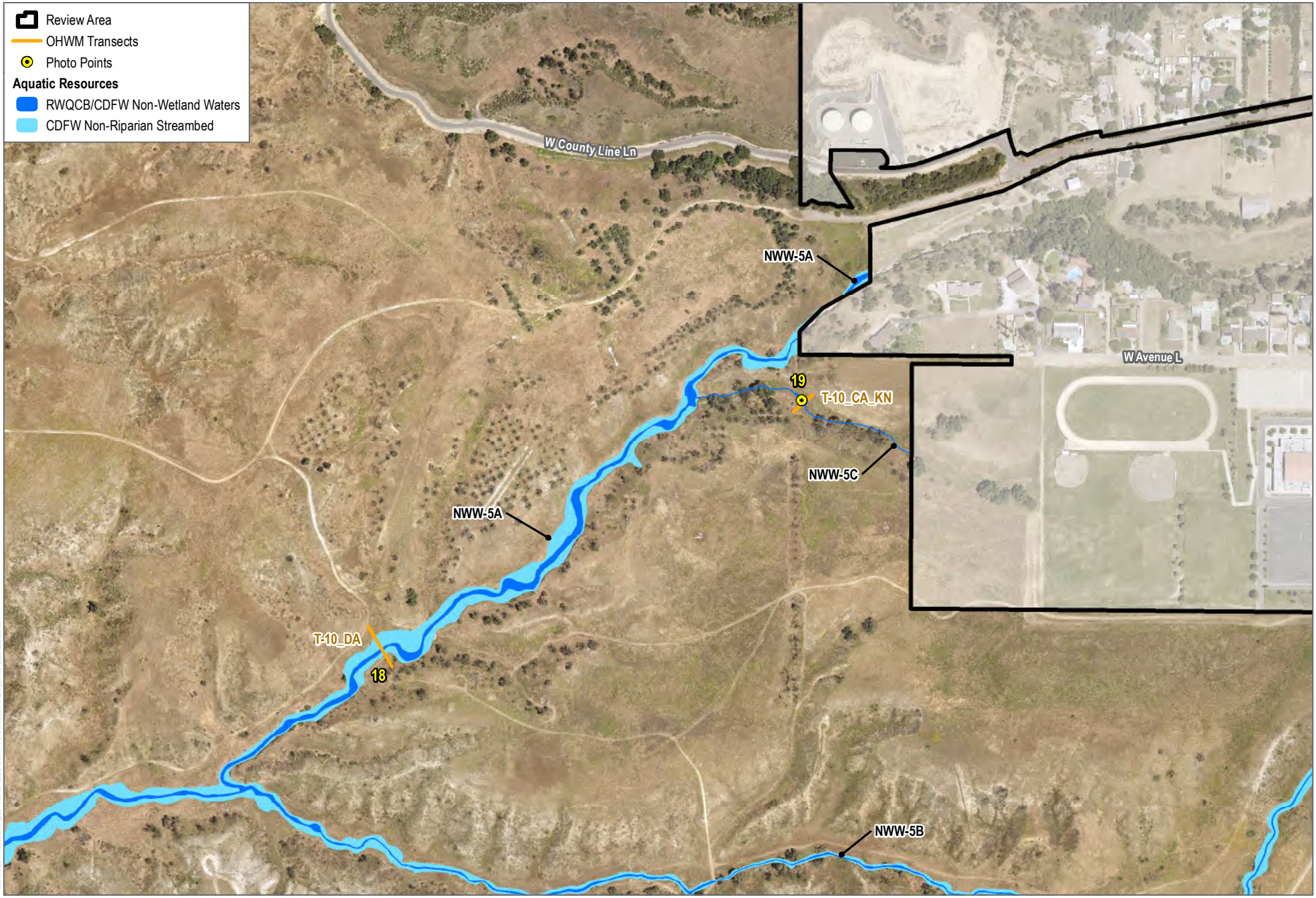

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4C

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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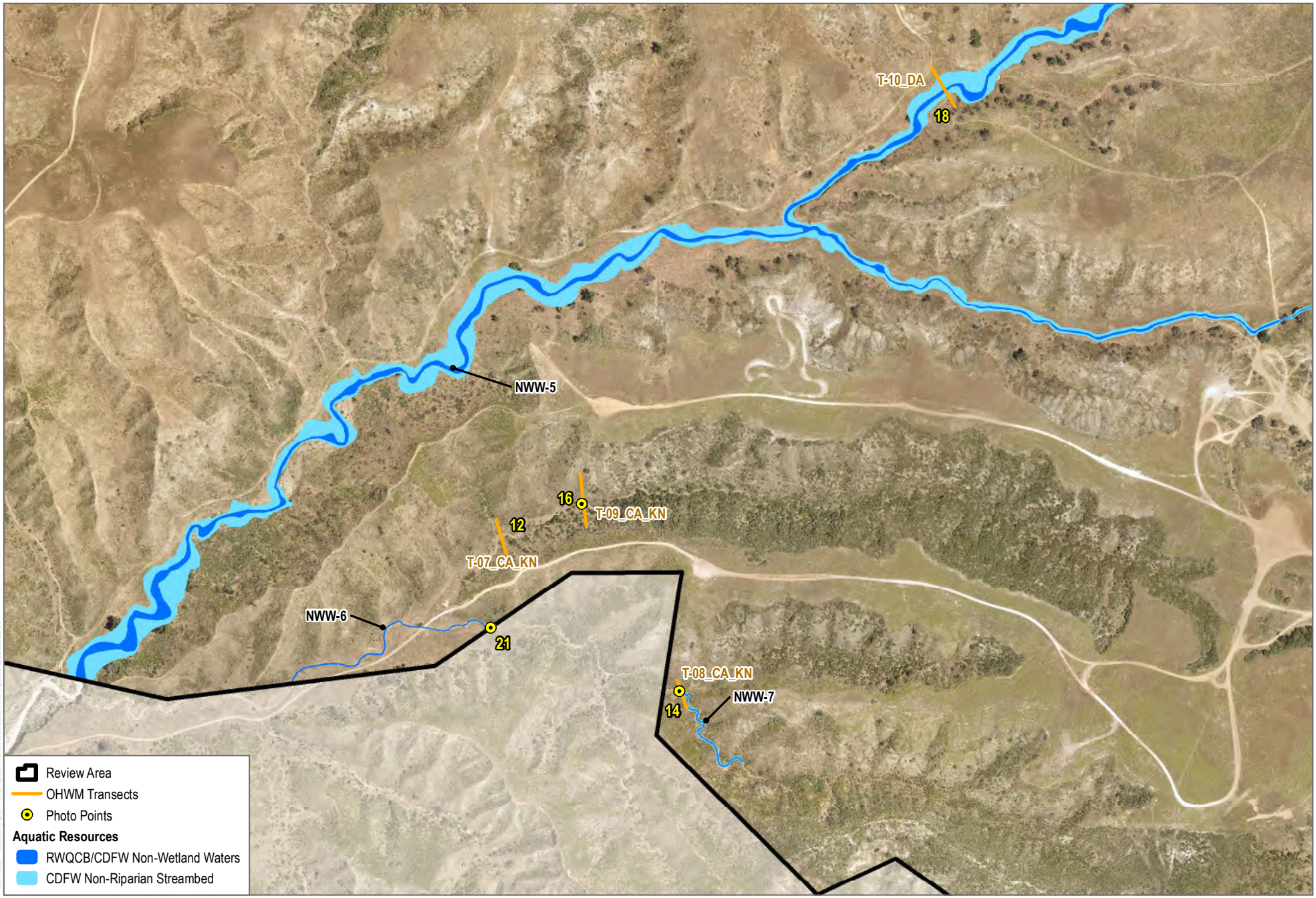

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4D

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4E

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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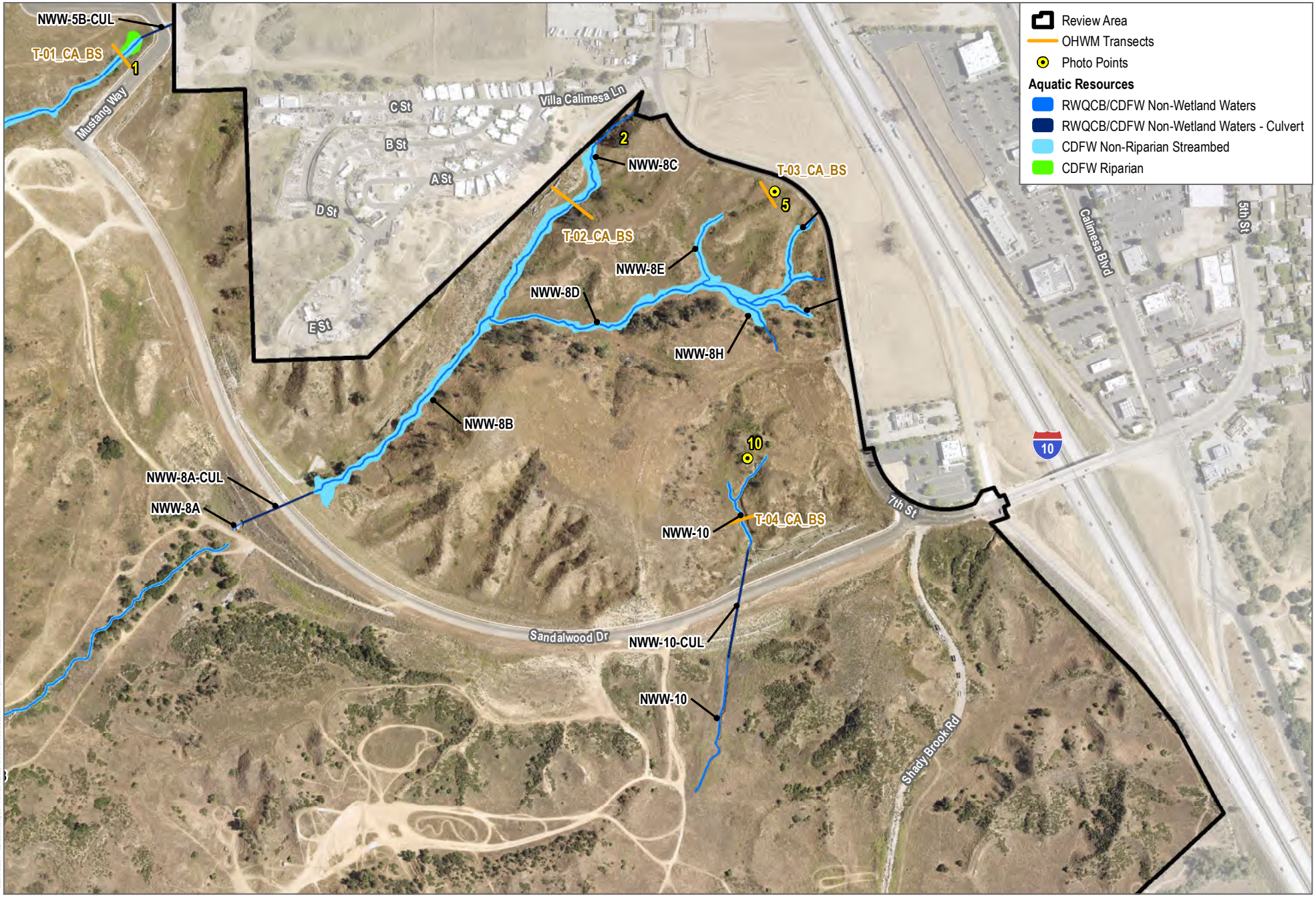

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4F

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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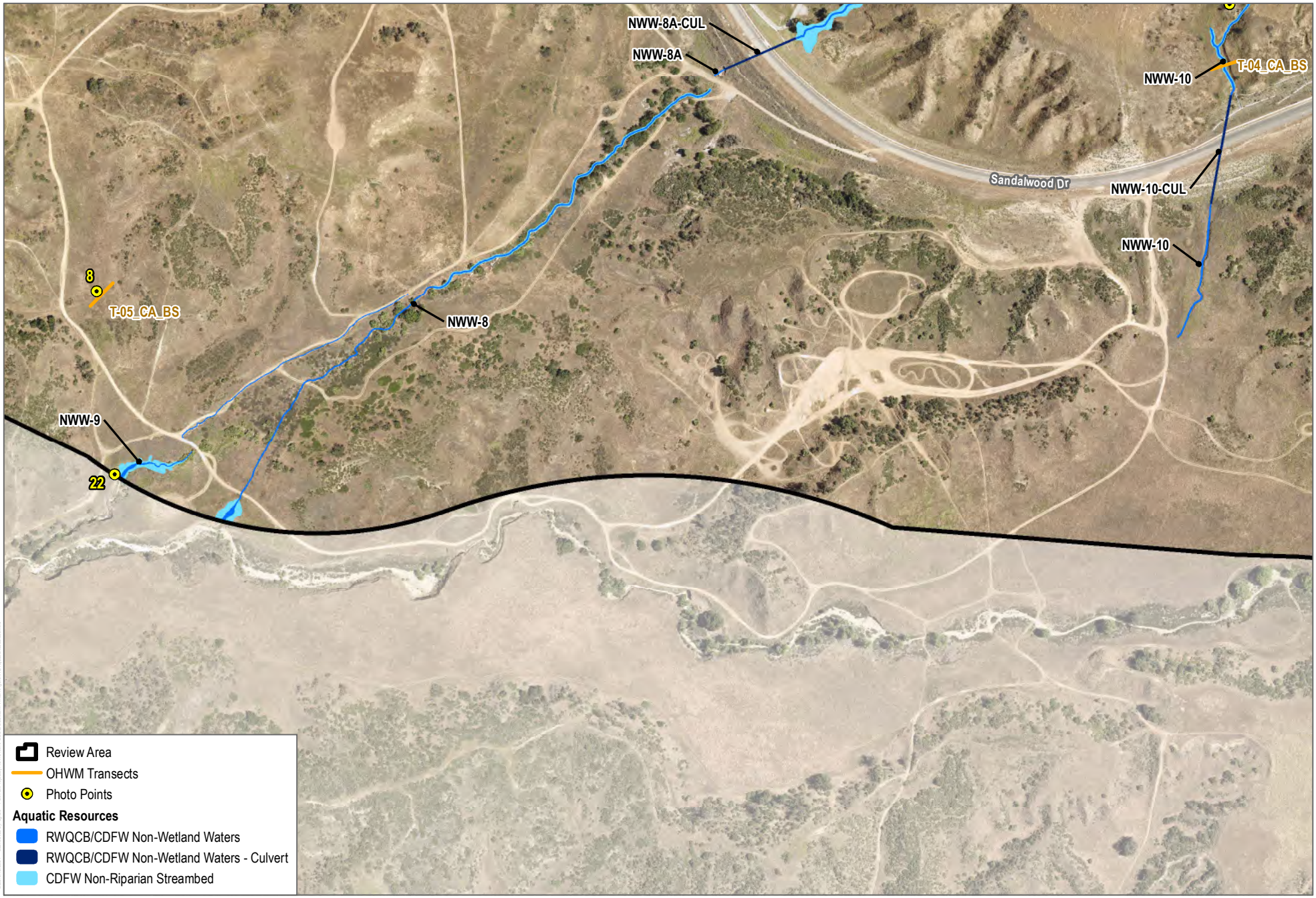

SOURCE: Riverside County; Open Street Map

DUDEK

0 250 500 Feet

FIGURE 4G

Potential Aquatic Resources

MESA VERDE SPECIFIC PLAN AQUATIC RESOURCES DELINEATION REPORT

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Appendix A

Request for an Approved Jurisdictional Determination

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that are or that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.
System of Record Notice (SORN): The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website:
http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. To (*District Name*): U.S. Army Corps of Engineers, Los Angeles District (SPL)

2. I am requesting a JD on property located at (*Street Address*): west of the northern terminus of Sandalwood Drive

City/Township/Parish: City of Calimesa County: Riverside State: California

Acreage of Parcel/Review Area for JD: 1,484.5 acres

Section: 8, 9, 14, 15, 16, 17, 22, 23 Township: 2 South Range: 2 West

Latitude (*decimal degrees*): 33.995615 ° Longitude (*decimal degrees*): 117.071384 °

(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. [X] I currently own this property. [ ] I plan to purchase this property.

[ ] I am an agent/consultant acting on behalf of the requester.

[ ] Other (*please explain*):

Mesa Verde LLC is the project applicant and landowner.

5. Reason for request: (*check as many as applicable*)

- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- [ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- [ ] A Corps JD is required in order to obtain my local/state authorization.
- [x] I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- [ ] I believe that the site may be comprised entirely of dry land.
- [ ] Other:

6. Type of determination being requested:

- [x] I am requesting an approved JD.
- [ ] I am requesting a preliminary JD.
- [x] I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- [ ] I am unclear as to which JD I would like to request and require additional information to inform my decision.

7. Typed or Printed Name: David Graves

Daytime Phone No.: 949.417.1396

Company Name: Mesa Verde LLC

Email Address: dgraves@shopoff.com

Address: 505 South Vulcan Avenue
Encinitas, California 92024

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature:	Date:

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

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Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.
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(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. [X] I currently own this property. [ ] I plan to purchase this property.

[ ] I am an agent/consultant acting on behalf of the requester.

[ ] Other (*please explain*):

Mesa Verde LLC is the project applicant and landowner.

5. Reason for request: (*check as many as applicable*)

- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- ☐ A Corps JD is required in order to obtain my local/state authorization.
- ☒ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- ☐ I believe that the site may be comprised entirely of dry land.
- ☐ Other:

6. Type of determination being requested:

- ☒ I am requesting an approved JD.
- ☐ I am requesting a preliminary JD.
- ☒ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

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Company Name: Mesa Verde Owner, LLC Email Address: dgraves@shopoff.com

Address: 505 South Vulcan Avenue
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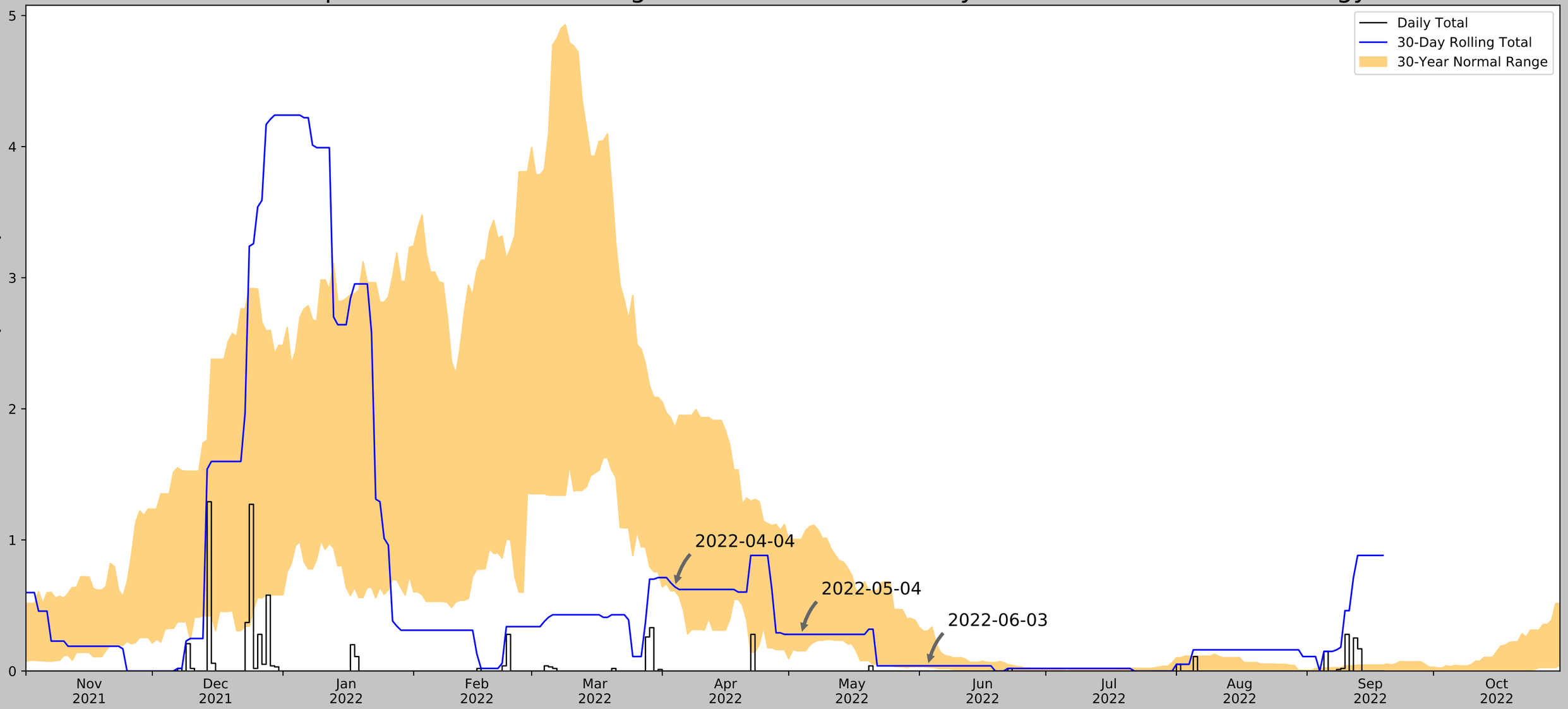
By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature:	Date: 6/18/2024

Appendix B

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	33.996138, -117.084312
Observation Date	2022-06-03
Elevation (ft)	2150.37
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

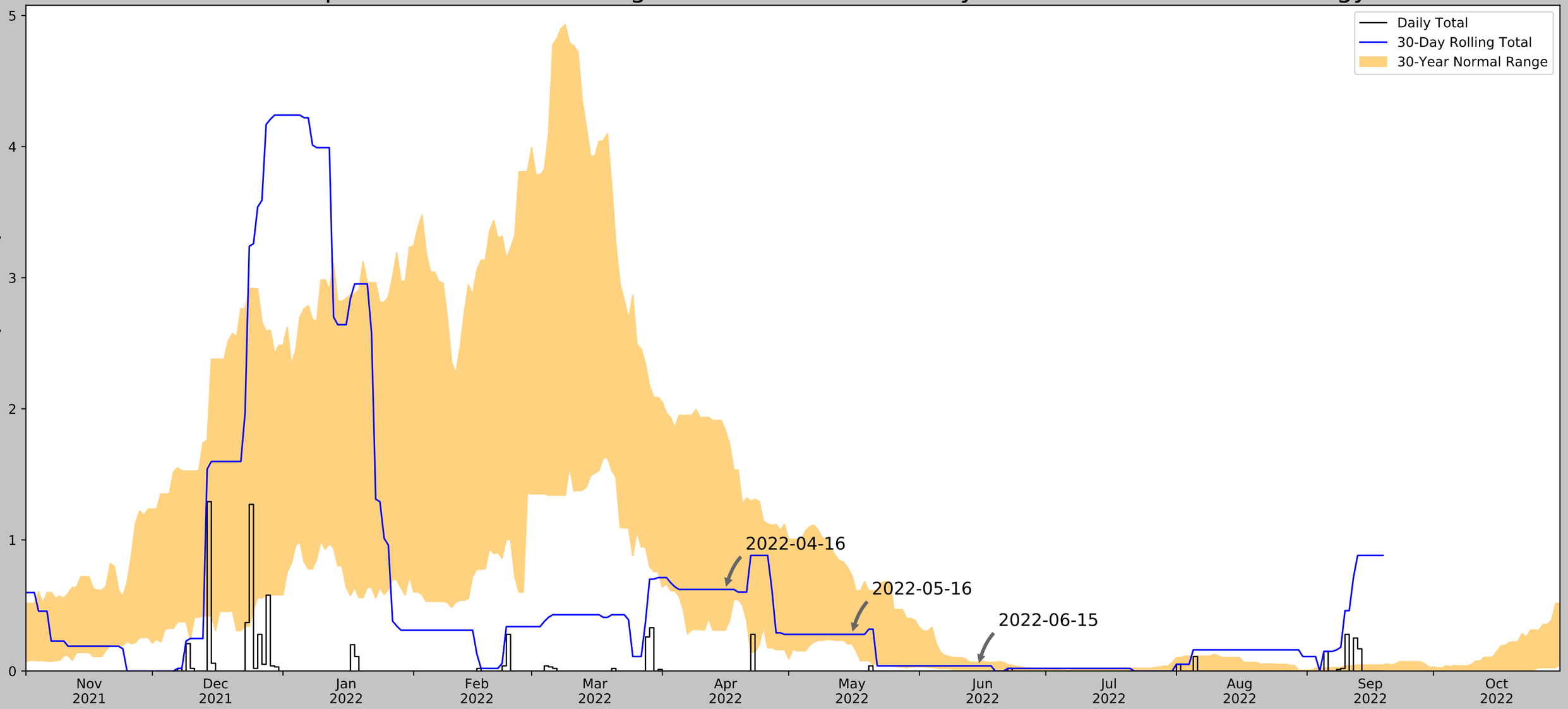
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-03	0.027953	0.304724	0.03937	Normal	2	3	6
2022-05-04	0.153543	1.004331	0.279528	Normal	2	2	4
2022-04-04	0.61063	1.857087	0.641732	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
REDLANDS	34.0369, -117.1947	1410.105	6.921	740.265	8.238	11218	90
RIVERSIDE 5.8 E	33.9406, -117.2964	1536.089	8.844	125.984	5.094	1	0
SAN BERNARDINO F S 226	34.1344, -117.2539	1140.092	7.54	270.013	5.429	41	0
RIVERSIDE CITRUS EXP	33.9669, -117.3614	985.892	10.704	424.213	9.358	93	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	33.996138, -117.084312
Observation Date	2022-06-15
Elevation (ft)	2150.37
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-15	0.011811	0.066535	0.03937	Normal	2	3	6
2022-05-16	0.206299	0.728346	0.279528	Normal	2	2	4
2022-04-16	0.311811	1.833858	0.622047	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
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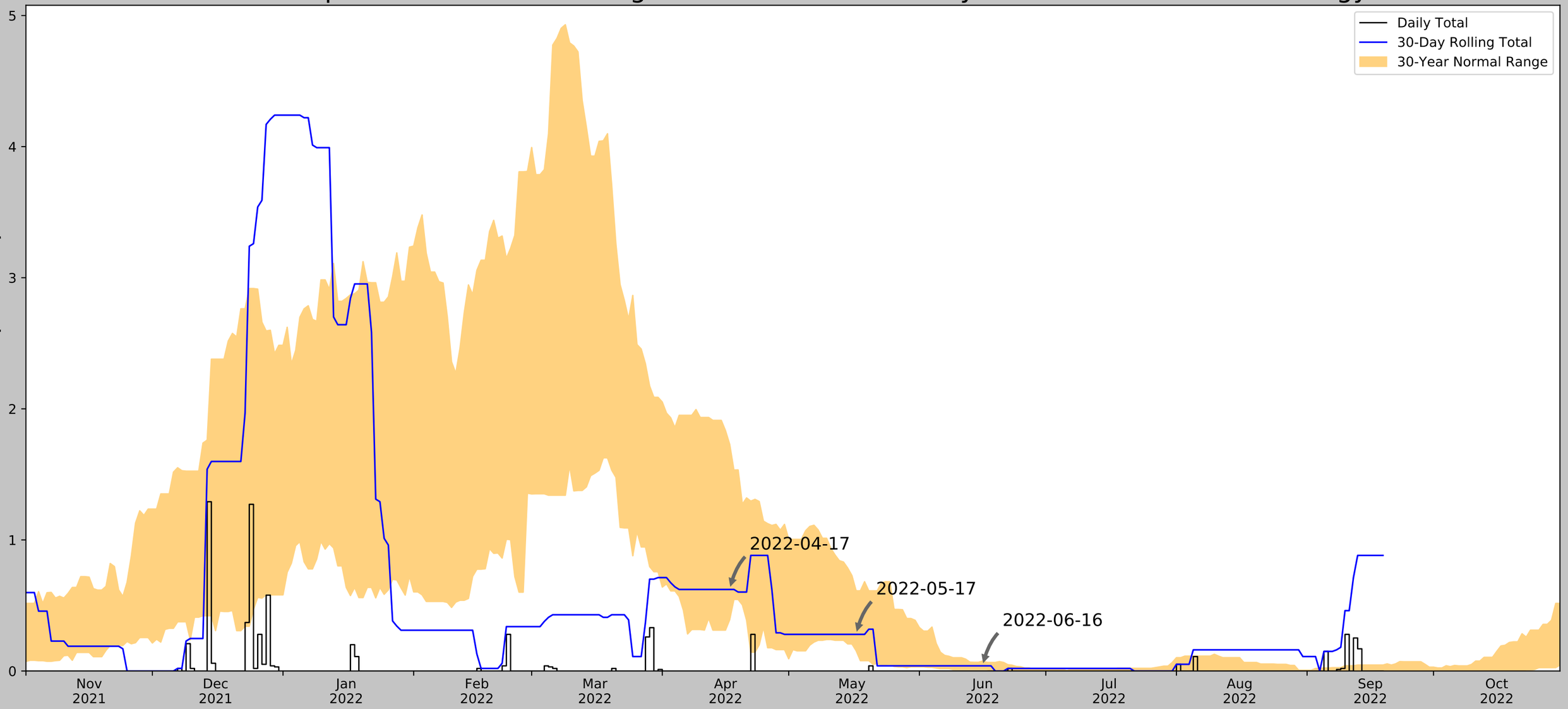
RIVERSIDE 5.8 E	33.9406, -117.2964	1536.089	8.844	125.984	5.094	1	0
SAN BERNARDINO F S 226	34.1344, -117.2539	1140.092	7.54	270.013	5.429	41	0
RIVERSIDE CITRUS EXP	33.9669, -117.3614	985.892	10.704	424.213	9.358	93	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	33.996138, -117.084312
Observation Date	2022-06-16
Elevation (ft)	2150.37
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-16	0.011811	0.075984	0.03937	Normal	2	3	6
2022-05-17	0.154331	0.611811	0.279528	Normal	2	2	4
2022-04-17	0.391339	1.729134	0.622047	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
REDLANDS	34.0369, -117.1947	1410.105	6.921	740.265	8.238	11218	90
RIVERSIDE 5.8 E	33.9406, -117.2964	1536.089	8.844	125.984	5.094	1	0
SAN BERNARDINO F S 226	34.1344, -117.2539	1140.092	7.54	270.013	5.429	41	0
RIVERSIDE CITRUS EXP	33.9669, -117.3614	985.892	10.704	424.213	9.358	93	0

Appendix C
Data Forms

OHWM DATA SHEET

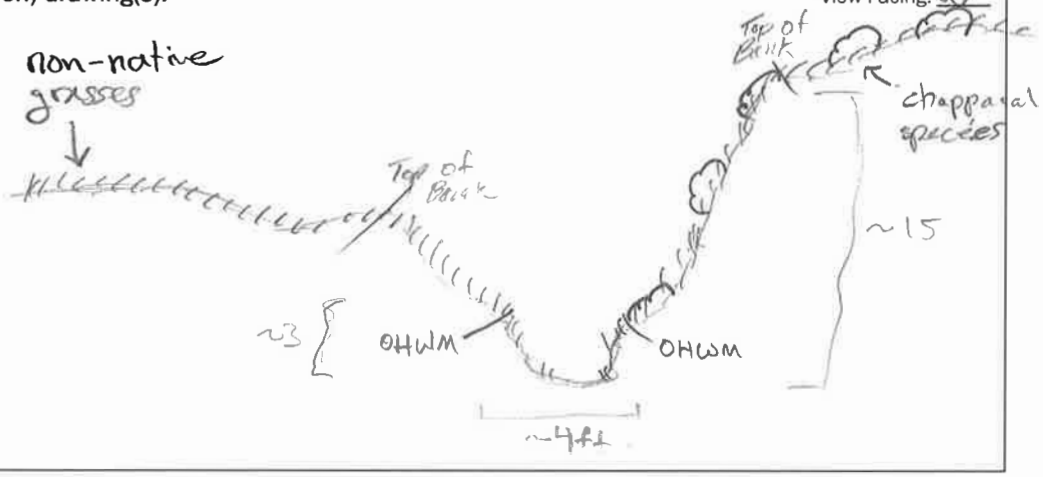
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-04-DA

Site Location: open, undeveloped lands south of yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 40
☒ OHWM width 4
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☒ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☒ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*
- ☒ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM		X	X		

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	20	80	0
Below OHWM	0	0	100	0

Veg Stage: ☒ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bro Rub Ave Bar	Bro Rub Ave Bar Eri Fas	none

OHWM DATA SHEET

T-04-DA

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- dirt bike impacts
- cattle grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☒ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

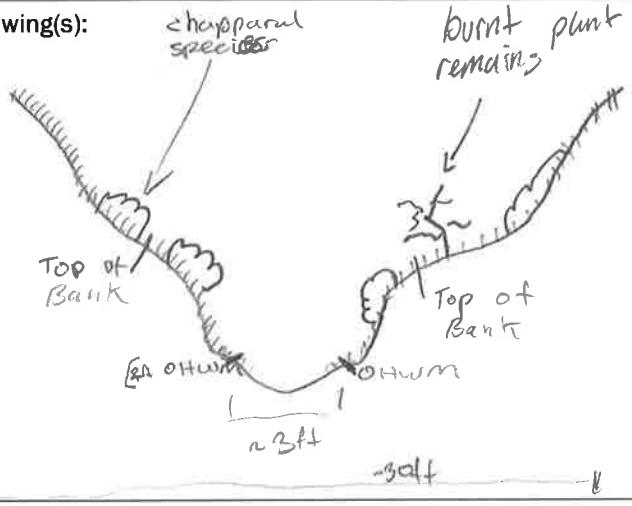
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, DK Transect ID: T-05_DA

Site Location: open, undeveloped lands south of Yucaipa

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: S



☒ Transect length 30ft
☒ OHWM width 3ft
☒ Channel depth 2ft
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☒ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	20	80	20
Below OHWM	0	10	60	40

Veg Stage: ☒ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
BroRub Ave Bar Hir Inc	EriFas BroRub Ave Bar Hir Inc	None

T-05_DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):
- clear that fire here in past - vehicle traffic - cattle

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

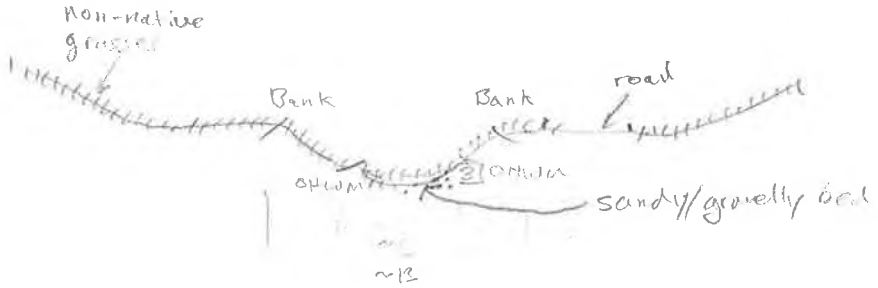
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): Dylan A, Olivia K Transect ID: T-01-DA

Site Location: open, undeveloped lands south of yucaipa

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: SW



☒ Transect length ~30
☒ OHWM width ~5
☒ Channel depth ~3
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM		X	X		

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	100	0

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bromus Avena	Bromus Avena	None

T-01-DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- dirt road nearby
- cattle impacts
- mowing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☑ Aerial photography	☑ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

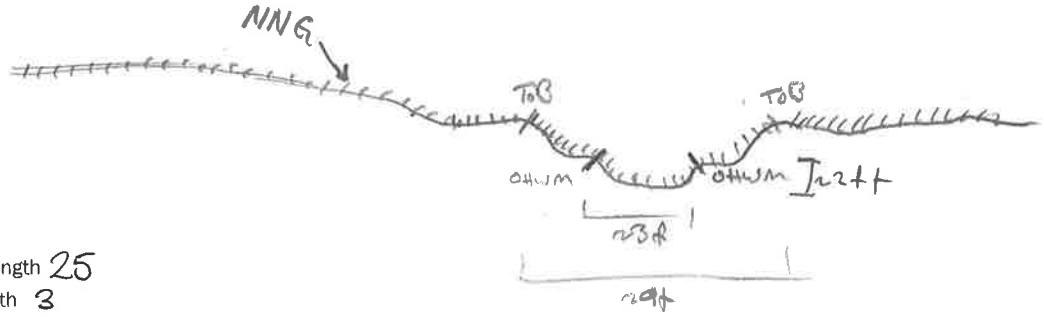
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-09-DA

Site Location:
open, undeveloped lands south of Yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: NW



☒ Transect length 25
☒ OHWM width 3
☒ Channel depth 2
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☒ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X				

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	70	30

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
BroDia AveBar	BroDia AveBar	None

T-09_DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- nearby dirt road
- cattle grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☑ Aerial photography	☑ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

T-10_CA_KN

OHWM DATA SHEET

Project: Mesa Verde Date: 6/16 Feature ID: _____

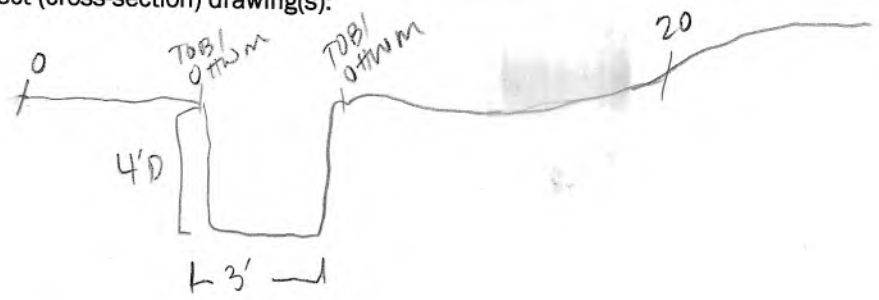
Investigator(s): C. Amoaku K. Nawal Transect ID: T-10

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: SE



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☑ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☑ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☑ Bed and banks
- ☐ Water staining
- ☑ Change in plant community and/or cover*

☑ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☑ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	1-5	75+	5-15
Below OHWM	0	0	0	100

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bro dia Bro sp. Hir inc	—	—

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

Deeply incised, narrow channel meandering through grassland.

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☐ Aerial photography	☑ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☑ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

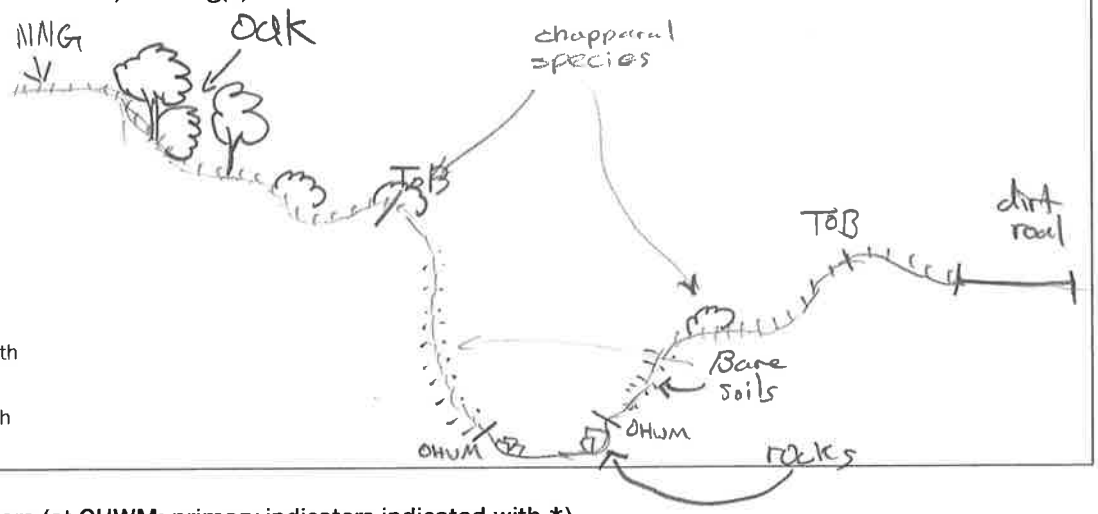
Project: Mesa Verde Date: 6/16/22 Feature ID: _____

Investigator(s): Dylan A, Eileen S Transect ID: T-10-DA

Site Location:

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: S



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	20	10	100	0
Below OHWM	0	0	20	80

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
AveBar BroDia AdeFas	AveBar BroDia AdeFas	None

OHWM DATA SHEET

T-10-04

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- trash dumping
- vehicle traffic
- cattle

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☒ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

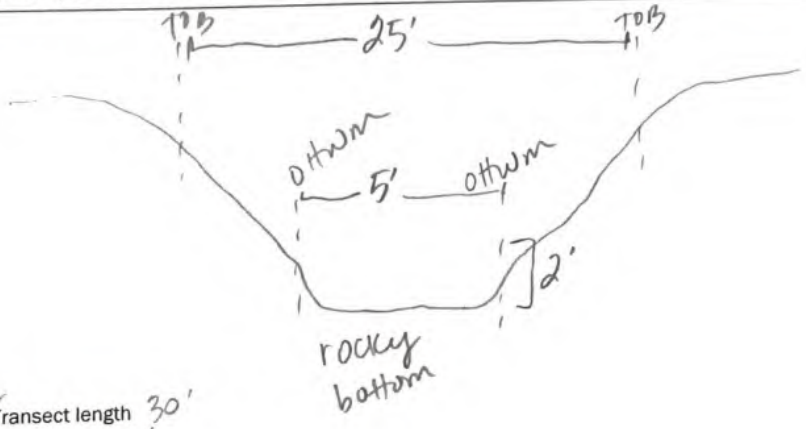
Project: Mesa Verde Date: 6/3/22 Transect: T-01

Investigator(s): Callie Amoaku, Britney Stritmater Feature Name:

Site Location:
Riparian near culvert where water appears to be Control released

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):



View Facing: SW

☑ Transect length 30'
☑ OHWM width 5'
☑ Channel depth
☐ Photo

Break in Slope at OHWM: ☐ Sharp (>60°) ☑ Moderate (30-60°) ☐ Gentle (<30°)

- ☑ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☑ Wracking
- ☑ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☑ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	Ø	5-15	50-75	1-5
Below OHWM	25-75	Ø	1-5	25-50

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Hir inc Bro rub Cen sol Son asp Eri fas	Ail alt Sal las Rhu ova	none

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Riparian veg and other tree species are likely present due to water released from a pipe that outlets into channel on east side of road. Pipe appears to be from facility to the south (see white pipe from photo @ other culvert)

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☐ Dry — no water, but @ culvert outlet there was some water released briefly during visit

Avg. depth:

Min. depth:

Temp:

Max. depth:

Checklist of resources (if available):

☑ Aerial photography	☑ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: ☑ Yes ☐ No

- ☑ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

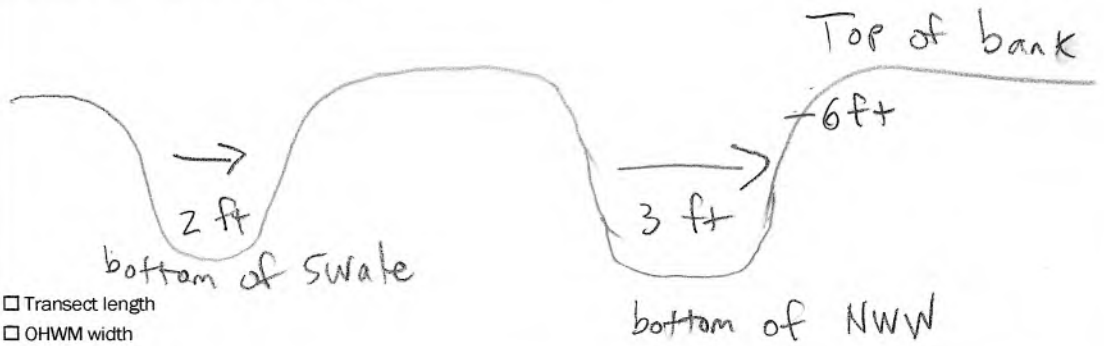
Project: Mesa Verde Date: 6/16/22 Feature ID: T-08

Investigator(s): C.A., K.N. Transect ID:

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☑ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☑ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☑ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM		10 - 20%		10 - 20%	1-5%
Below OHWM		20 - 30%		5 - 10%	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	15 - 20%	75+%	5%
Below OHWM	0	5%	75+%	5%

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
ADEFAS MALFAS RHUARO	ACMGLA BROTER AMSINT CENMEL	N/A

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☐ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☑ Existing delineation(s) for site	

Other drawings (aerial view), notes:

NWW feature has sandy bottom compared to upland which is more of a loam sand, only OHWM indicator.

Swale lacks any OHWM indicators and is only a topo relief.

Other forms related to this feature: ☐ Yes ☑ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

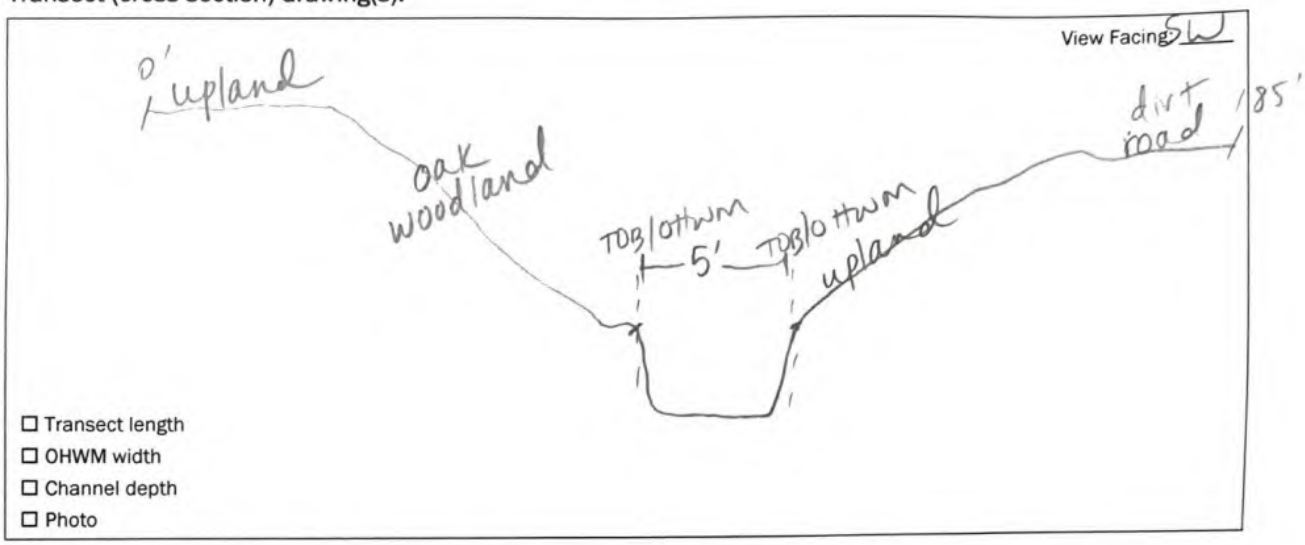
Project: Mesa Verde Date: 6/3/22 Transect: T-02

Investigator(s): Callie Amoaku, Britney Stirtmater Feature Name: _____

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: ☑ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

☑ Natural line impressed on the bank	☐ Sediment sorting
☐ Shelving	☐ Leaf litter disturbed or washed away
☐ Changes in the character of soil	☐ Scour
☐ Destruction of terrestrial vegetation	☐ Deposition
☐ Presence of litter and debris	☑ Bed and banks
☐ Wracking	☐ Water staining
☑ Vegetation matted down, bent, or absent	☑ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	15-25	15-25	50-75	
Below OHWM	Ø	Ø	1-5	75-100

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Que agr Hir inc Bro rub Bro dia	Sam nig Hir inc Bro dia	n/a

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Deeply incised channel w/ vertical banks.

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☑ Dry

Avg. depth:

Min. depth:

Temp:

Max. depth:

Checklist of resources (if available):

☑ Aerial photography	☑ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: ☐ Yes ☑ No

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/3/22 Transect: T-04

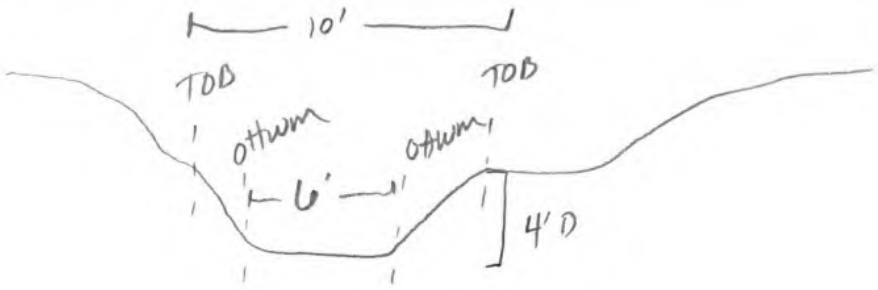
Investigator(s): C. Amoaky, B. Strittmatter Feature Name: _____

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: S



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

Break in Slope at OHWM: ☑ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

☑ Natural line impressed on the bank	☐ Sediment sorting
☐ Shelving	☐ Leaf litter disturbed or washed away
☐ Changes in the character of soil	☐ Scour
☐ Destruction of terrestrial vegetation	☐ Deposition
☐ Presence of litter and debris	☑ Bed and banks
☐ Wracking	☐ Water staining
☐ Vegetation matted down, bent, or absent	☐ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	5-15	75-100	0
Below OHWM	0	0	100	0

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bro rub Bro dia Ave fat Rhu ova Hir inC	Bro rub Bro dia Ave fat Hir inC	\

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Erosion from road runoff contributing to water source for these features. ottwm ind. minimal. No signs of recent flow.

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☒ Dry

Avg. depth:

Min. depth:

Temp:

Max. depth:

Checklist of resources (if available):

☐ Aerial photography	☒ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: ☐ Yes ☐ No

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-02-DA

Site Location: open, undeveloped land south of Yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): NO OHWM View Facing: S

☒ Transect length 30
☒ OHWM width —
☒ Channel depth ~10
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X				

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	
Below OHWM	0	0	100	

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
BroRub HirInc	BroRub HirInc	none

T-02-DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- dirtbike impacts
- cattle grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☐ Aerial photography	☒ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☒ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☒ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/3/22 Transect: T-03

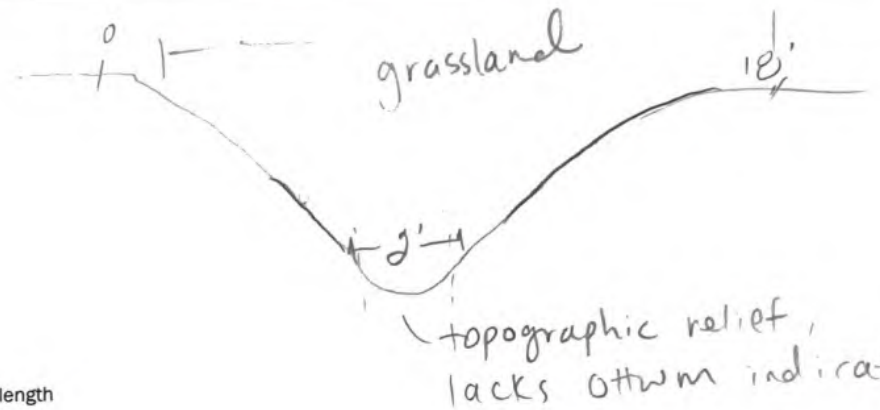
Investigator(s): C. Amoaeli, B. Strittmater Feature Name: Erosional

Site Location:
Erosional feature draining road runoff. NO OHWM indicators. Incised further down stream.

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: W



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

Break in Slope at OHWM: ☑ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	1-5	5-15	75-100	0
Below OHWM	0	0	100	0

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bro mad Bro rub Hir inc Avena fat Ade fas Epi can	\	\

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):
Road runoff. Feature is eroded, but OHWM indicators lacking, indicating lack of recent flows. Incised downstream.

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☑ Dry

Avg. depth:
Min. depth:
Temp:
Max. depth:

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: ☐ Yes ☐ No

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/15/22 Feature ID: _____

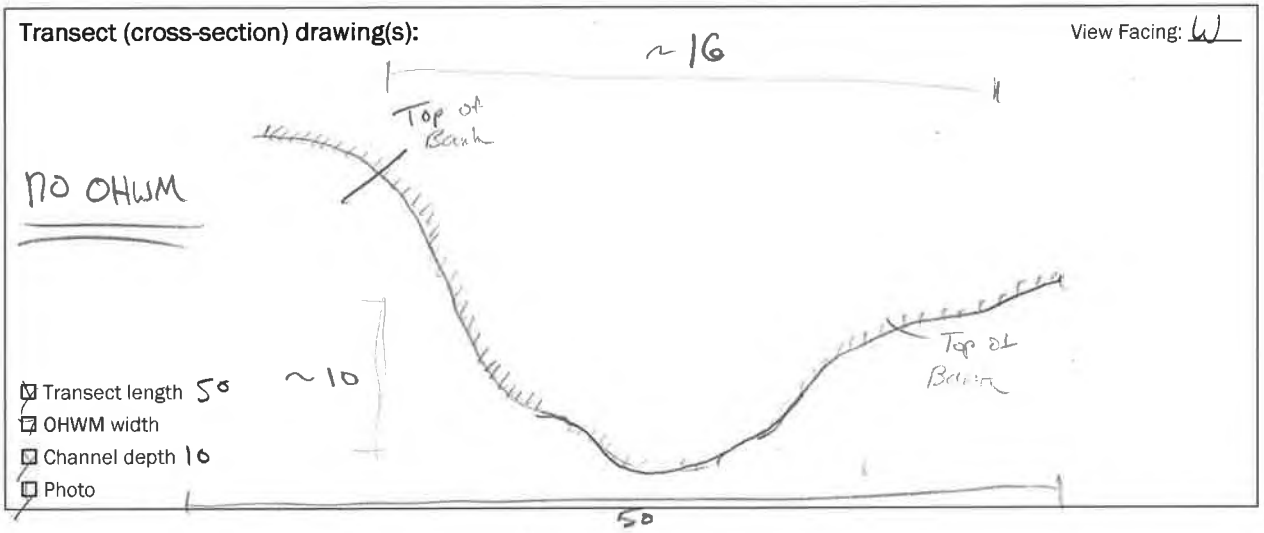
Investigator(s): DA, DK Transect ID: T-03-DA

Site Location:

open, undeveloped lands south of Yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☒ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM		X	X		

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	30	80	20
Below OHWM	0	0	30	70

Veg Stage: ☒ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
AveBar BroRub	AveBar BroRub	none

T-03-DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- dirt bike impacts
- cattle

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☒ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☒ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/3/22 Transect: T-05

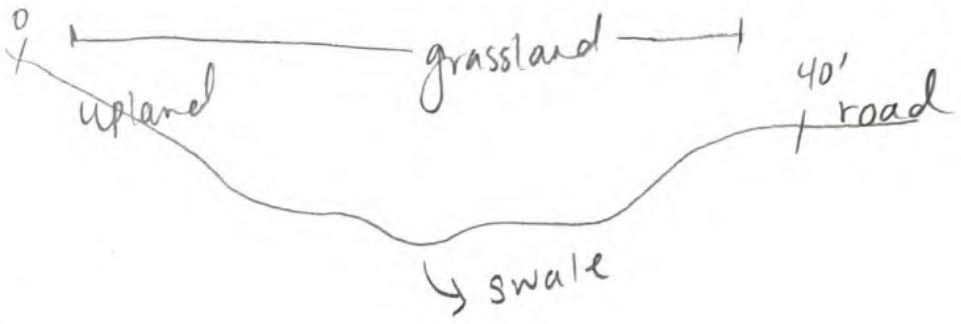
Investigator(s): C. Amoaku, B Strittmater Feature Name: _____

Site Location:
Previously mapped feature. Swale. NO OHWM indic.

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: S



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

Break in Slope at OHWM: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

☐ Natural line impressed on the bank	☐ Sediment sorting
☐ Shelving	☐ Leaf litter disturbed or washed away
☐ Changes in the character of soil	☐ Scour
☐ Destruction of terrestrial vegetation	☐ Deposition
☐ Presence of litter and debris	☐ Bed and banks
☐ Wracking	☐ Water staining
☐ Vegetation matted down, bent, or absent	☐ Change in plant community and/or cover

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Brodia Ave fat Eri fas	\	\

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Hydrology:

- ☐ Flowing water
- ☐ Standing water
- ☐ Saturated
- ☐ Dry

Avg. depth:

Min. depth:

Temp:

Max. depth:

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: ☐ Yes ☐ No

- ☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
- ☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

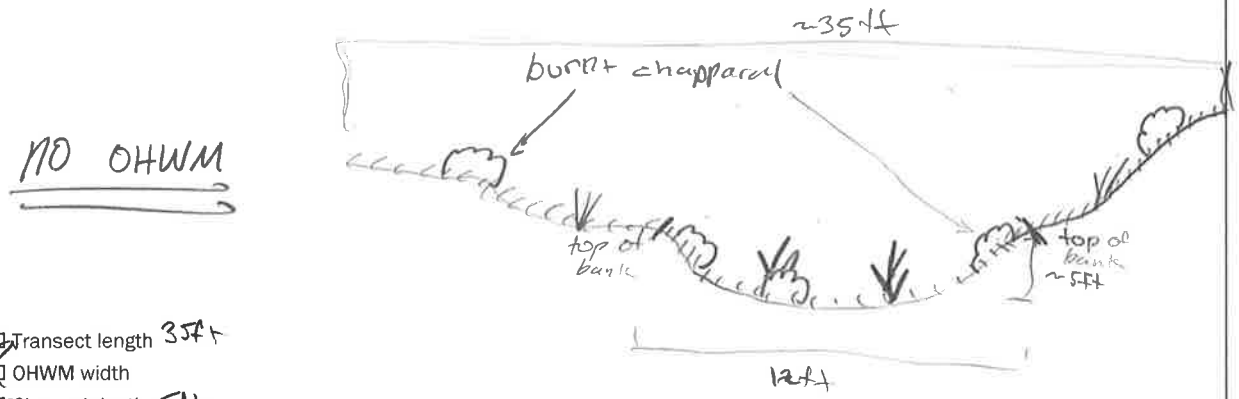
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-06-DA

Site Location: open, undeveloped lands south of Yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☐ Transect length 35ft
☐ OHWM width
☐ Channel depth 5ft
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X				

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	30	100	0
Below OHWM	0	30	100	0

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Ave Bar Ade Fas Bro Rub Hir Inc	Ave Bar Ade Fas Bro Rub	none

T-06-DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):
- vehicle traffic - cattle

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☒ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

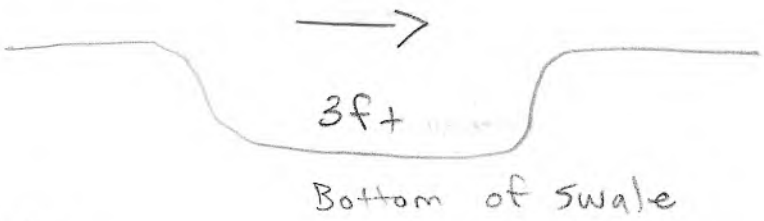
Project: Mesa Verde Date: 6/16/22 Feature ID:

Investigator(s): C. Amoaku K. Narel Transect ID: T-07

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture Same in and out of swale

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	5%	85% +	5%
Below OHWM	0	0	85% +	5%

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
QUEBER ERIFAS RHUARO MALFAS RHACRO	BRODIA ERO CIC BROTEC AMSINT	NA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☐ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☑ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Topo relief area begins/becomes defined NE of the transect and is located in a gully. Lacks OHWM indicators.

Other forms related to this feature: ☐ Yes ☑ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

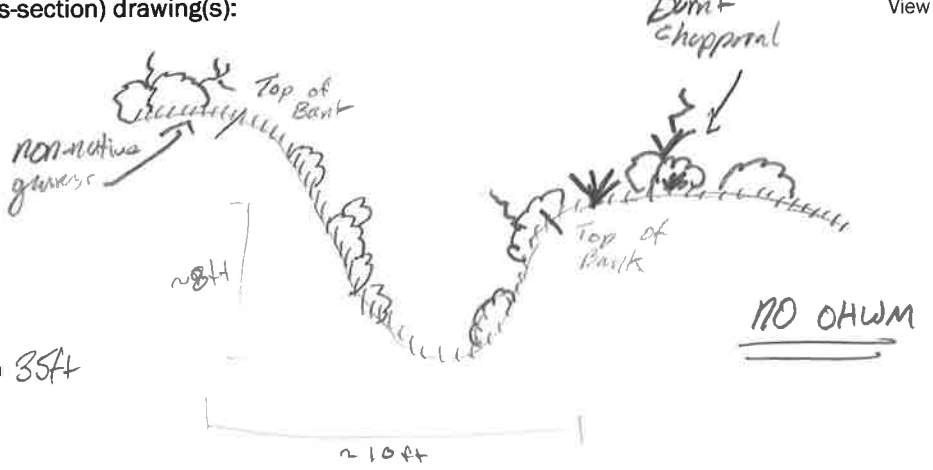
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-07_DA

Site Location: open, undeveloped lands south of yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 35ft
☒ OHWM width
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	50	70	30
Below OHWM	0	50	100	0

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
EriFas AdeFas AveBar HirInc	HirInc AdeFas AveBar EriFas	none

T-07_DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):
-cattle grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

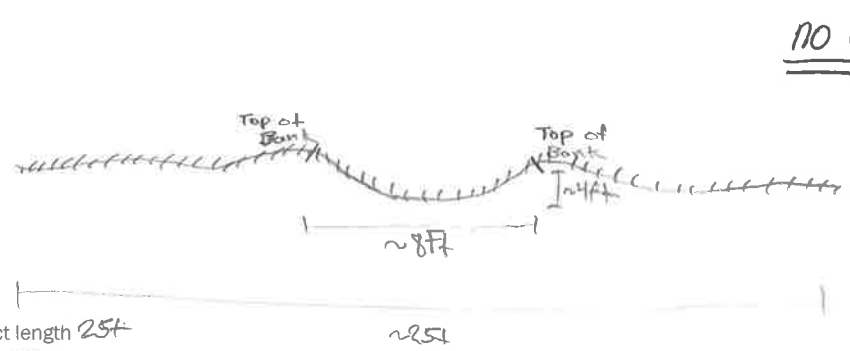
Project: Mesa Verde Date: 6/15/22 Feature ID: _____

Investigator(s): DA, OK Transect ID: T-08-DA

Site Location: open, undeveloped lands south of Yucaipa

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: S



☐ Transect length 25+
☒ OHWM width
☐ Channel depth n/a
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	100	0

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Ave Bar BroRub	Ave Bar BroRub	None

T-08_DA

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- nearby road
- cattle grazing
- dirt bike tracks

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☒ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Mesa Verde Date: 6/16/22 Feature ID: _____

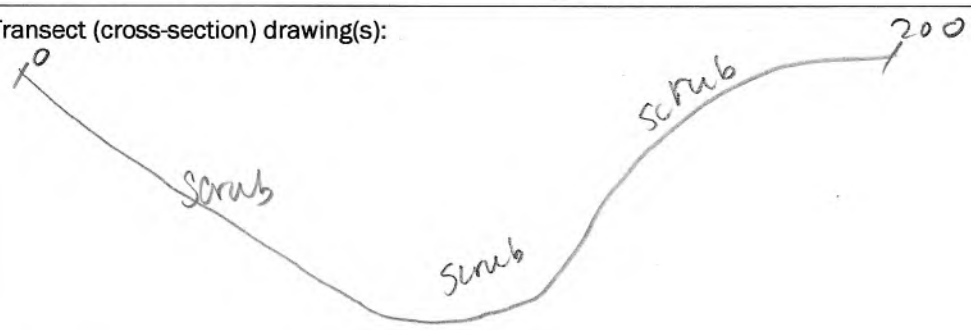
Investigator(s): C. Amoaku, K. Narel Transect ID: T-09

Site Location:

Gully

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *) – none

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture – same throughout

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	Ø	15-25	75+	1-5
Below OHWM	Ø	15-25	75+	1-5

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Bro dia Mal fas same Bro sp. Rha cro Rhu int		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Gully starts to the east and while there is a bottom of the gully, it lacks any OHWM indicators here. Further west, a swale forms (see T-07), which still lacks OHWM although it is defined and continues off-site.

Other forms related to this feature: ☑ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☑ Low flow channel or other representative section (OHWM datasheet) T-07

OHWM DATA SHEET

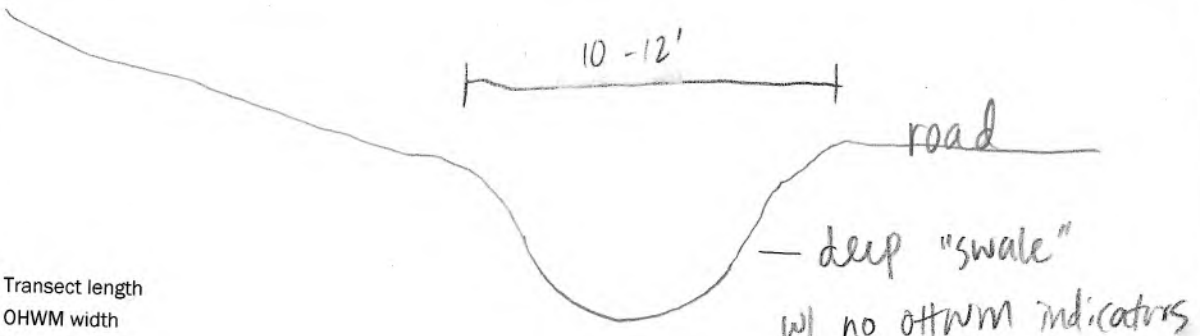
Project: Mesa Verde Date: 6/16/22 Feature ID: _____

Investigator(s): C. Amoaku, K. Narel Transect ID: T-11

Site Location:

Feature Type: ☑ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: ____



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture - no change

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	1-5	0	75+	1-5
Below OHWM	0	1-5	75+	1-5

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
Que sp. Bro dia Hirinc B. gourd	Sam nig Stephanomeria sp. Buffalo gourd hirinc	

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

The feature is disconnected near transect - possible filled in to access other side. NO culvert, and no signs of flow on either side.

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☑ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Well-defined, fairly deep feature that lacks a defined bed and bank or other OHWM indicators.

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

Appendix D
Review Area Photographs

Photo 1. Transect T-01_CA_BS within NWW-5B.

Photo 2. Transect T-01_DA within NWW-3.

Photo 3. Transect T-02_CA_BS within NWW-8C.

Photo 4. Transect T-02_DA within swale north of NWW-1A.

Photo 5. Transcript T-03_CA_BS within swale northeast of NWW-8E.

Photo 6. Transcript T-03_DA within swale east of NWW-1A.

Photo 7. Transcript T-04_DA within NWW-1.

Photo 8. Transcript T-05_CA_BS within swale.

Photo 9. Transcent T-05_DA within NWW-2.

Photo 10. Transect T-04_CA_BS within NWW-10.

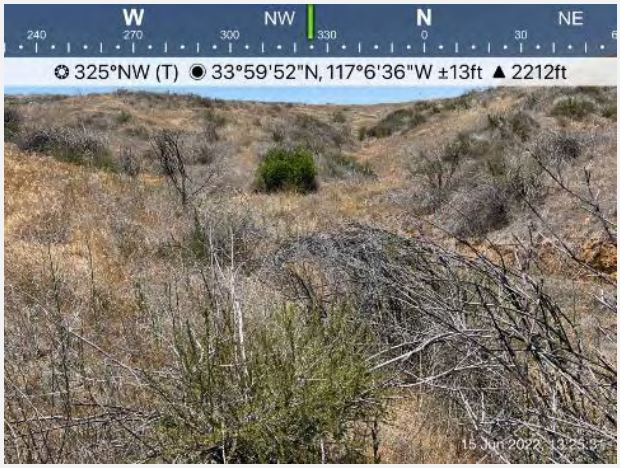


Photo 11. Transect T-06_DA within swale.

Photo 12. Transect T-07_CA_KN within swale.

Photo 13. Transect T-07_DA within swale.

Photo 14. Transect T-08_CA_KN within NWW-7.

Photo 15. Transect T-08_DA within swale.

Photo 16. Transcript T-09_CA_KN within swale.

Photo 17. Transect T-09_DA within NWW-4.

Photo 18. Transect T-10_DA within NWW-5A.

Photo 19. Transect T-10_CA_KN within NWW-5C.

Photo 20. Transect T-11_CA_KN within swale northeast of NWW-4.

Photo 21. NWW-6

Photo 22. NWW-9

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Appendix H
Arborist Report

DRAFT

Arborist Report

Mesa Verde Specific Plan Area 2 Amendment 2

SEPTEMBER 2024

Prepared for:

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Printed on 30% post-consumer recycled material.

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APPENDICES

A Individual Tree Locations
B Tree Information Matrix
C Tree Impact Exhibit

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
City	City of Calimesa
DSH	diameter at standard height
ISA	International Society of Arboriculture
project	Mesa Verde Specific Plan Area 2 Amendment 2 Project

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1 Introduction

Dudek was retained by Mesa Verde Landowners LLC to conduct a protected tree assessment for protected trees located within the City of Calimesa (City) and off-site areas located within the City of Yucaipa, for the Mesa Verde Specific Plan Area 2 Amendment 2 Project (project). The project site is located southwest of Interstate 10 and southeast of Live Oak Canyon Road (see Figure 1, Project Location, and Figure 2, Project Vicinity). The off-site area north of the site is located in the City of Yucaipa. The trees located within this off-site area are therefore subject to the City of Yucaipa's Municipal Code. The project site is proposed for residential development, and, as such, trees within and immediately adjacent to the grading limits are expected to be impacted by construction-related activities. This report summarizes Dudek's evaluation and analysis of protected tree resources within the survey area at the project site and off-site areas in the Cities of Calimesa and Yucaipa, California, and the potential impacts that may occur because of the project. Unless otherwise specified, the use of the term "City" in this report shall be used to refer to the City of Calimesa.

The field inventory and assessments of the survey area's protected trees were conducted between January 18, 2023, and February 28, 2024. The focus of Dudek's field evaluations was to identify and inventory all trees that are subject to regulation by the City's Municipal Code that could be affected by the proposed development per the site plan (see Figure 3, Site Plan). This report includes a discussion of the protected tree inventory, evaluation and analysis methods, a summary of findings, identification of anticipated impacts, and tree protection and tree impact mitigation recommendations consistent with the City's Municipal Code and the tree removal permit process specified therein.

The City's Municipal Code (Sections 18.70.100 through 18.70.120) includes provisions for addressing trees on developing sites. Specifically, the City's Municipal Code indicates that the City realizes there are multiple benefits provided by oak trees and places high priority on their preservation and conservation. The City's Municipal Code provides for the removal of oak trees if justified as a reasonable and conforming property use.

The City requires a permit for the cutting, damage, removal, encroachment, or relocation of a protected oak tree, heritage oak tree, or protected stand of oak trees, which are defined as follows (City of Calimesa Municipal Code Section 18.10.020):

- "Heritage oak tree" means an oak tree of the genus *Quercus* other than a protected oak tree or scrub oak that has a trunk measuring 12 inches or more in diameter as measured four and one-half feet from the natural grade (i.e., diameter at standard height [DSH]).
- "Protected oak tree" means an oak tree of the genus *Quercus*, including scrub oak (*Quercus dumosa*), other than a heritage oak tree or scrub oak, that has a trunk measuring two inches or more in diameter as measured four and one-half feet from the natural grade (i.e., diameter at standard height [DSH]).
- "Protected stand of oak trees (oak grove)" means a cluster of four or more oak trees of the genus *Quercus*, including scrub oaks (*Quercus dumosa*).

The City further requires a permit if more than five healthy, shade-providing, aesthetically valuable trees are to be cut down, uprooted, destroyed, or removed within a 36-month period (City of Calimesa Municipal Code Section 18.70.120). For the purposes of the protected tree inventory and based upon discussions with the City's planning department, a mature protected tree is defined as any tree, other than an oak, that has a diameter of 24 inches or greater.

The City of Yucaipa requires an oak tree permit for the cutting, removal, encroachment into the protected zone, or relocation of any protected oak tree (City of Yucaipa Municipal Code Section 89.0515), which is defined as any oak tree of the genus *Quercus*, except for scrub oak (*Quercus dumosa*), that exceeds 2 inches in DSH The protected zone of a tree is defined as "a specifically defined area totally encompassing an oak tree … using the dripline as a point of reference, the protected zone shall commence at a point five feet (5') outside of the dripline and extend inward to the trunk of the tree. In no case shall the protected zone be less than fifteen feet (15') from the trunk of an oak tree" (City of Yucaipa Municipal Code Section 89.0505).

The City of Yucaipa has additional protections that regulate native non-oak trees and heritage trees. Specifically, a removal permit is required for the removal of any native tree with a DSH of 6 inches or greater, as well as for any heritage tree, which is defined as any tree that is in a linear planting of three or more trees that is 50 feet or greater in length within established windrows or parkway plantings (City of Yucaipa Municipal Code Section 89.0315). The City's regulations for coniferous trees require trees to be treated after removal to prevent the proliferation of pests (City of Yucaipa Municipal Code Division 9 Chapter 2). Because no regulated oak trees, native non-oak trees, heritage trees, or conifers were found in the off-site areas in the jurisdiction of Yucaipa, the City of Yucaipa is not discussed further in this report.

The analysis of potential tree impacts in this report considers the requirements outlined in the appropriate sections of the City's Municipal Code (City of Calimesa Municipal Code Sections 18.70.120 and 18.80). The proposed project would involve removal of protected trees to facilitate site development. Chapter 4, Mitigation Requirements and Recommendations, of this report recommends mitigation measures for anticipated tree removal to mitigate impacts from construction encroachment into the protected zone of regulated trees that would result from the proposed project. The provided measures are consistent with the provisions of the City's Municipal Code.

1.1 Summary

The field survey recorded 2,656 trees within the survey area including 2,350 oak trees and 306 non-oaks. Of the 2,656 total trees, 2,041 oak trees (1,368 protected oak trees and 673 heritage oak trees) and 36 mature trees are subject to regulation under the City's Municipal Code. The location of the inventoried trees is depicted in Appendix A, Individual Tree Locations, and individual tree attributes are detailed in Appendix B, Tree Information Matrix.

The approximately 1,475.8-acre survey area, including the 1,463.1-acre project site and 12.7 acres of off-site improvements, is located in the western portion of the City of Calimesa or the southern portion of the City of Yucaipa. Of the 2,656 total trees on the property, 1,579 trees (59.45%) are located directly within the impact area of the proposed project and would require removal. Of the 1,579 tree removals, 250 are heritage oak trees, 887 are protected oak trees, 15 are mature non-oak trees, and 427 are non-jurisdictional. These trees would not be candidates for preservation in place based on the extent of grading required to prepare the areas for development. In addition to the 1,579 trees that would be removed, a total of 141 (5.31%) trees located outside the impact area would be encroached upon. Of the 141 tree encroachments, 70 are heritage oak trees, 50 are protected oak trees, 6 are mature non-oak trees, and 15 are non-jurisdictional. The encroached upon trees would be preserved in place but may experience root, trunk, or canopy damage. Therefore, these trees are considered impacted and included in the mitigation program, although they would be provided special protection measures, as detailed in this arborist report, and may not require removal. The remaining 936 (35.24%) trees, including 353 heritage oak trees, 431 protected oak trees, 15 mature non-oak trees, and 137 non-jurisdictional trees, are proposed for preservation/avoidance. Preserved/avoided trees are located outside the development footprint but may be subject to indirect impacts. To

avoid indirect impacts to these preserved trees, this arborist report provides a discussion of measures that would be implemented during construction activities to minimize or avoid indirect impacts.

The City of Calimesa's oak tree preservation mitigation requirements call for impacted regulated oak trees to be replaced at a minimum ratio of 1:1 with container trees or 9:1 with acorns. Furthermore, Chapter 18.80 of the City's Municipal Code states that if all of the mitigation trees cannot be accommodated on site, "mitigation other than replacement shall include the payment of replacement costs to replace each tree that is removed, as determined by the oak tree assessment." Protected mature non-oak tree removals should be replaced at a 1:1 ratio with 36-inch box specimen trees.

Per the City's tree mitigation requirements and based up on the anticipated project-related impacts, Dudek recommends the planting of a mixture of acorns, 1-gallon, 15-gallon, 24-inch box, 36-inch box, 48-inch box, and 60-inch box trees to mitigate the removal and encroachment of 1,257 protected/heritage oak trees and 21 mature trees. Specifically, to mitigate the removal and encroachment of 1,257 oak trees, Dudek recommends planting, at a minimum, 3,394 acorns, 251 1-gallon trees, 189 15-gallon trees, 189 24-inch box trees, 126 36-inch box trees, 63 48-inch box trees, and 63 60-inch box trees. It is recommended that the 4,275 replacement trees/acorns be incorporated into the site's developed landscape, parks, and street master plan. The recommended replacement plan results in a 9:1 acorn and 1:1 container tree replacement ratio with a mixture of a variety of oak tree age classes, whereas the City's 1:1 mitigation ratio results in a single age class of either 15-gallon or 24-inch box trees. As discussed in Section 4.2, Mitigation Recommendations, the importance of age diversity within a forest or woodland is critical to its future success and resiliency against pests, disease, and climate change.

Furthermore, to mitigate the removal/encroachment of 21 mature trees, Dudek recommends planting a minimum of 21 36-inch box trees within the site's developed landscape. Based on a review of the 2023 Land Use Plan (City of Calimesa 2023a) for the proposed project, the site can accommodate all the required mitigation trees. However, should it be found that the site cannot accommodate all mitigation trees, it is recommended that the project applicant work closely with the City to identify off-site planting locations and/or pay an in-lieu of fee for the replacement cost of those trees that cannot be accommodated on site.

1.2 Project Description

The Mesa Verde Specific Plan Area 2 Amendment 2, which is an Amendment to the Mesa Verde Estates Specific Plan (SPA 13-01) that was previously adopted in 2007 and subsequently amended in 2017, would serve as the policy and regulatory document, functioning as the zoning code, for the development of the Mesa Verde Specific Plan Area 2 Amendment 2 Area. All future development plans and entitlements must be consistent with regulations set forth in the Mesa Verde Specific Plan Area 2 Amendment 2 and, for issues not covered, must be consistent with all applicable City regulations and/or an approved Development Agreement.

Project Site

The Mesa Verde Specific Plan Area 2 Amendment 2 would be implemented in phases over time, and would permit a maximum of 3,650 residential units, including a mix of single-family detached, single-family attached, and multi-family units. The projected number of units within each of the residential zones include: 790 units of High Residential; 594 units of Medium High; 1,450 units of Medium; 677 units of Low Medium; and 139 units of Low. The project includes up to 4.9 million square feet of Business Park (industrial/logistics use), up to 250,000 square feet of Commercial, 2 elementary school sites, open space and public/private parks, utility infrastructure, and roadways. An internal network of trails would connect the project's land uses and parks.

Open Space

The Project includes 303.8 acres of on-site open space that will be fully avoided and left in its natural state except for the on-site Western Riverside County Multiple Species Habitat Conservation Plan riparian/riverine mitigation area and temporary impacts, which will be subjected to restoration activities, further described in Section 7, Project Mitigation, of the Biological Resources Technical Report. The Project's temporary impacts will be included in the open space once restoration has been completed. All fuel modification, landscaping, and manufactured slopes are included as a permanent impact and are located outside of the open space area.

Off-Site Improvement Areas

The project would also include 12.7 acres of off-site improvement areas that are fuel modification, transportation, or utilities. Required improvements to off-site facilities that would be constructed as a part of the proposed project are located in four general areas as shown on Figure 1 of the Biological Resources Technical Report:

1. A 100-foot-wide fuel management zone along the northern boundary of the survey area within the City of Yucaipa. This fuel management zone occurs on either side of the Yucaipa Valley Water District solar array project. The solar array project is being built by others and will provide maintained groundcover, which is considered a fuel management zone equivalent.
2. County Line Road improvements between the Project site and the I-10 interchange would involve redeveloping the existing roadway into a Modified Collector (60-foot right-of-way). The roadway would be widened within the existing right-of-way, consisting of a 48-foot paved roadway section, curb-to-curb (i.e., 12-foot lanes each direction, one 12-foot center turn lane, and 6-foot bicycle lanes on each side), and 6 feet of unpaved right-of-way on either side of the curb. The future design of this portion of County Line Road would be determined upon completion of engineering plans to be prepared in coordination with the City of Calimesa, subject to the City's approval.
3. Trenching for water and recycled water pipelines adjacent to the eastern side of the Mesa View Middle School property, from the Project site northward to connect to existing utilities under Avenue L.
4. Redevelopment of the west side of 7th Street from Sandalwood Drive to the north property line. Paving of the west side of the street (off-site) would include curb/gutter and sidewalk improvements for a distance along the street frontage.

1.3 Location/Setting

The approximately 1,475.8-acre survey area, including the 1,463.1-acre project site and 12.7 acres of off-site improvements, is located in the western portion of the City, which is located in western Riverside County (Figure 2). The survey area is located immediately west of Interstate 10 and south of the Riverside and San Bernardino County line; however, some of the off-site improvement areas occur within the City of Yucaipa, which is located within San Bernardino County The project is intersected by Sandalwood Drive to the east and County Line Lane to the north. Specifically, the study area is located in Sections 8, 14, 22 and 23, Township 2 South, Range 2 West, as depicted on the U.S. Geological Survey (USGS) El Casco and Yucaipa, California 7.5-minute topographic quadrangle maps. Regional access to the Project is provided via Sandalwood Drive and County Line Lane. The project consists of 20 Assessor's Parcel Numbers listed in Table 1.

Table 1. List of Assessor's Parcel Numbers within the Study Area

Riverside County							
411210010	411210028	413030025	413040013	413040014	413040017	413040018	413040020
413040023	413050009	413050010	413050012	413160011	413200003	413200040	413200042
413200044	413200048	—	—	—	—	—	—
San Bernardino County							
030121108	030121102	—	—	—	—	—	—

The project site consists of undeveloped, hilly grasslands with occasional shrubs and trees. Access to the site is largely limited to unpaved dirt roads. The project site includes numerous hills, valleys, and deeply incised drainage channels. Elevation of the site ranges from below 2,100 feet to above 2,300 feet, resulting in an elevation difference across the site of roughly 200 feet (City of Calimesa 2023b). Typical of the species, the site's oaks are strongly associated with north-facing slopes of varying steepness and along drainage channels. At these locations, soil moisture is typically higher, enabling the oaks to persist through the hottest and driest periods. A primary drainage and its tributary extend southwest from the northeastern section of the property. This drainage includes portions with nearly 90-degree channel banks that drop over 20 feet. Based on the Land Use Plan (City of Calimesa 2023a) provided to Dudek, the development footprint includes most of the site, avoiding several drainage channels. The site is surrounded by residential developments, the Yucaipa Valley Water District treatment facility, a mobile home park, Mesa View Middle School, and adjacent vacant parcels (City of Calimesa 2023b).

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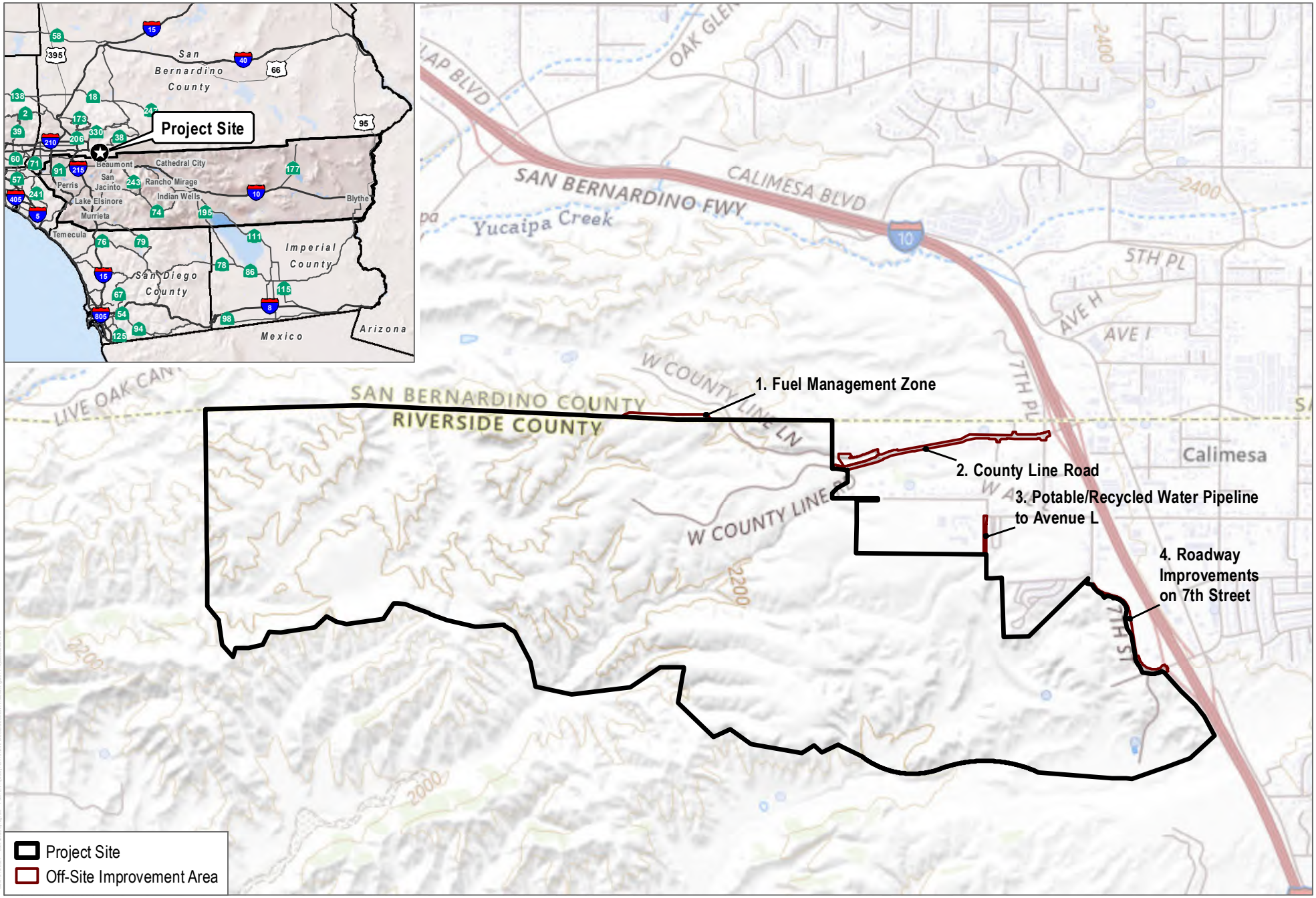

SOURCE: USGS 7.5-Minute Series El Casco and Yucaipa Quadrangles; Township 2S / Range 2W / Sections 08, 09, 14, 15, 16, 17, 22, 23

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Mesa Verde Specific Plan Area 2 Amendment 2 Biological Resources Technical Report

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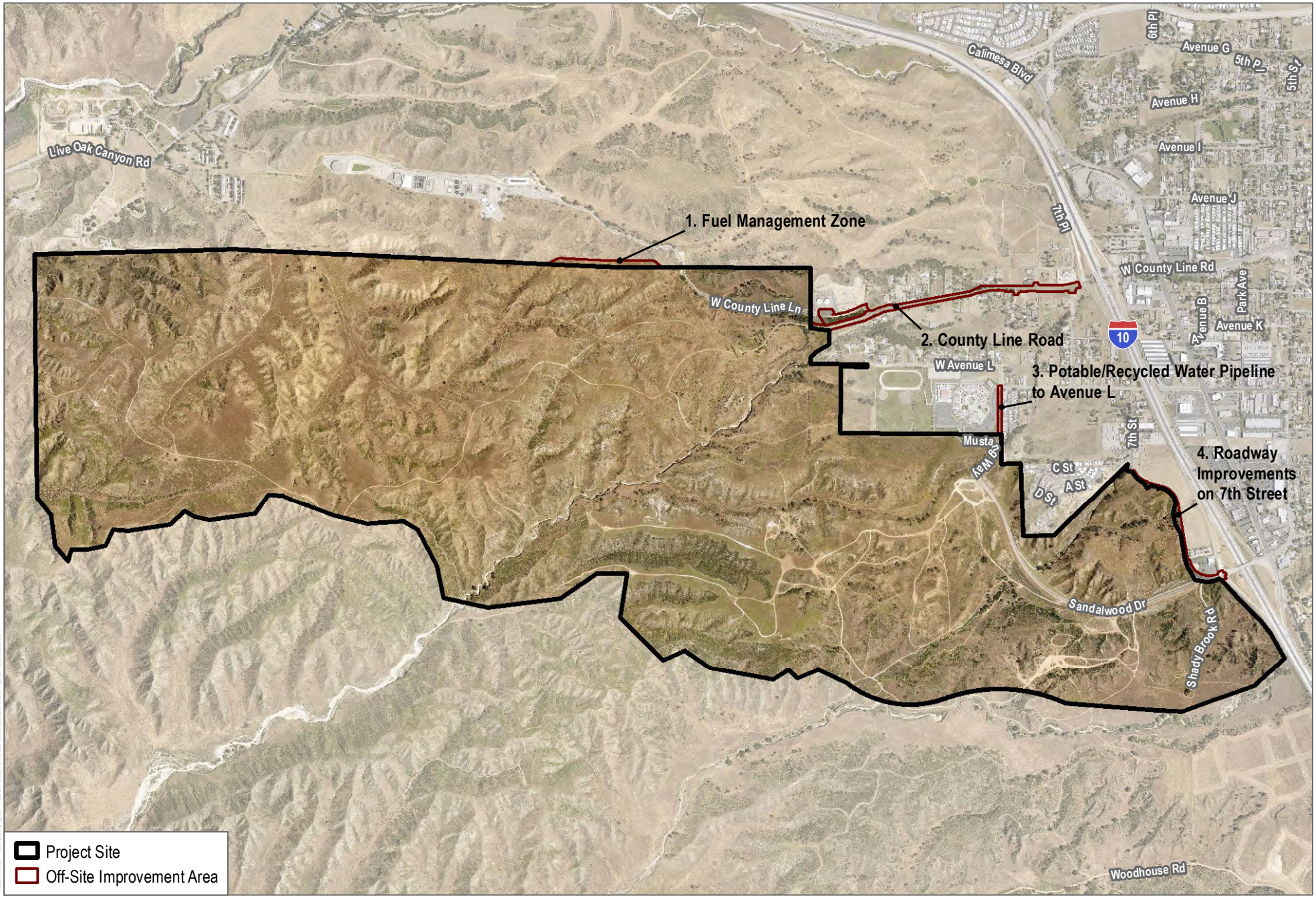

SOURCE: Hunsaker 2024; Riverside County; Open Street Map

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FIGURE 2

Project Vicinity

Mesa Verde Specific Plan Project

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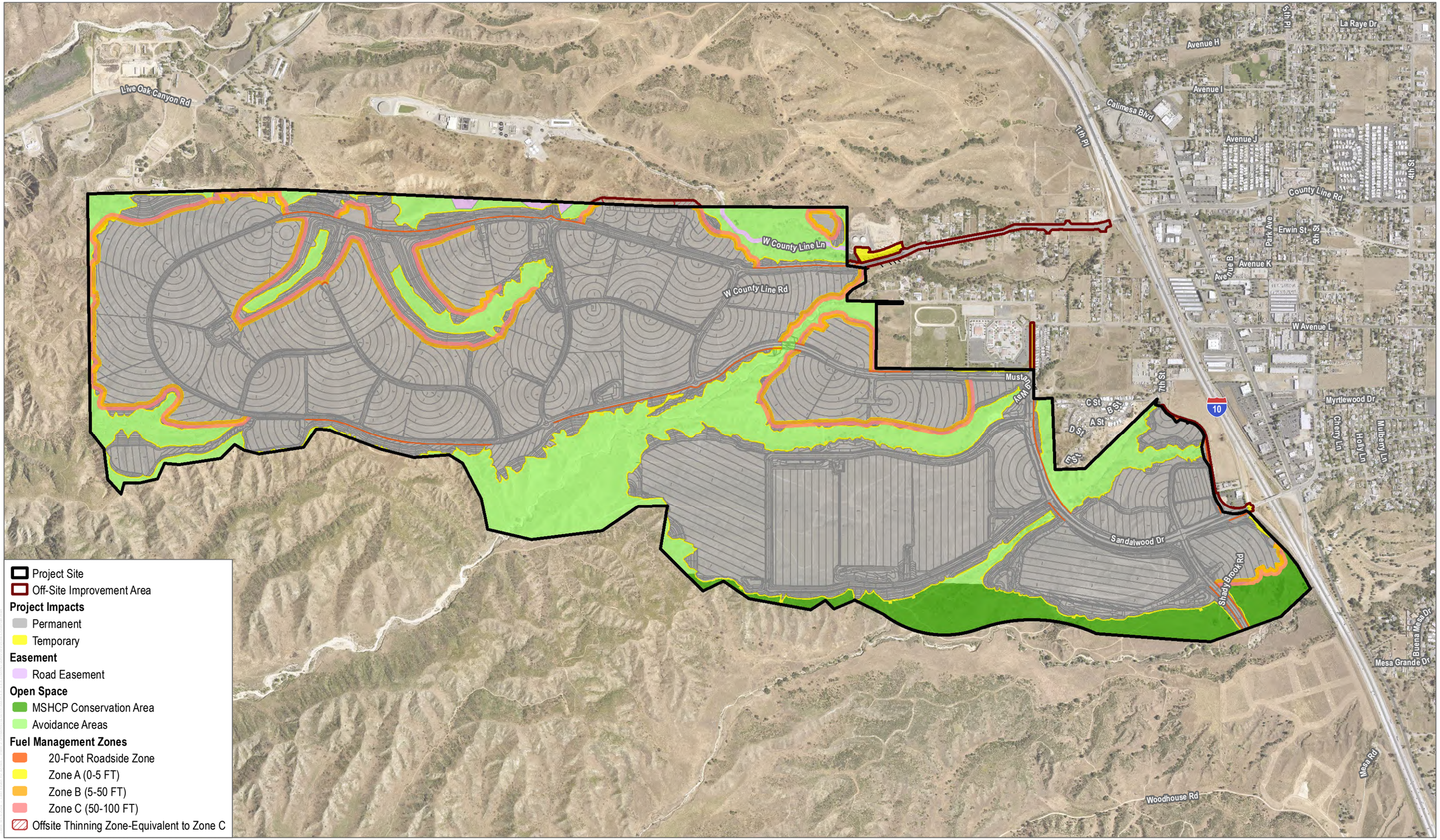

SOURCE: Hunsaker 2024; Riverside County 2023; Open Street Map

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FIGURE 3

Site Plan

Mesa Verde Specific Plan Project

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2 Methods

The following sections describe the methods used by Dudek's International Society of Arboriculture (ISA) Certified Arborists to inventory and evaluate trees in the tree survey area.

2.1 Field Tree Inventory and Evaluation

Dudek's ISA Certified Arborists Katrina Burritt (No. WE-10771A), Aida Castro (No. WE-13396A), and Sarah Tian (No. WE-13677A) conducted a comprehensive inventory and assessment of the trees in the survey area between January 18, 2023, and February 28, 2024. The arborists examined trees that would potentially be disturbed by the proposed development and then mapped protection zones. The survey area, for the purposes of the tree inventory, encompassed the approximately 1,475-acre Mesa Verde property, including the 1,163-acre project site, 12 acres of off-site improvements, and 300 acres of on-site avoidance areas. The location of the survey area is depicted in Appendix A.

Tree attribute data collected during the field survey included species, trunk diameter and circumference, tree height, canopy spread, general health condition, structural condition, and presences of observable pests or other tree maladies. Trunk diameters were measured using a diameter tape, which provides adjusted numbers for diameter measurements when wrapping the tape around the circumference of a tree trunk. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in its Guide for Plant Appraisal (ISA 2000), published by ISA, and in accordance with guidance given in the City's Municipal Code.

Trunk diameter and circumference measurements were taken at 4.5 feet above the ground along the trunk axis, with a few common exceptions. In cases where the trunk of a tree split into multiple stems at approximately 4.5 feet above the ground, the measurement was made at the location that best represented the trunk's diameter. Tree height measurements were estimated by the arborist, and tree canopy diameter measurements were documented by "pacing off" the measurement based on the arborist's knowledge of their stride length or visually estimating the canopy width.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Health and structure were graded as good, good/fair, fair, fair/poor, or poor. Good condition trees exhibit acceptable vigor, healthy foliage, minor if any structural issues, and no apparent maladies. Fair condition trees are typical, with few maladies and moderate structural issues, and may exhibit less vigor in foliage and new growth. Trees assigned a poor condition rating exhibit significant health or structural problems or damage.

The location of each individual regulated tree was mapped using a Trimble Pathfinder Pro XH GPS receiver. The Pathfinder has a horizontal accuracy of 1 meter (1 sigma) using differential code positioning techniques. Because tree canopies can sometimes cause loss of satellite lock by blocking the line of sight to satellites, an electronic compass and reflectorless electronic distance measuring device were also used in mapping tree locations. The electronic distance measuring/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. Dudek used the data collected to create a primary tree inventory dataset inclusive of all regulated trees within the tree survey area.

Individual tree locations are presented in Appendix A; individual tree attribute data and impact determination are presented in Appendix B; and impacts are presented in Appendix C, Tree Impact Exhibit.

2.2 Tree Impact Analysis

Following data collection, processing, and analysis efforts, an impact determination was made for each tree based on proximity to the proposed disturbance area. Impact determinations used in this report are as follows:

- Preserved/avoided (tree not affected by project)
- Removal (tree to be removed)
- Encroachment (project disturbance would occur within the protected zone of the tree)

For the purposes of this report, and consistent with the City ordinance, the following criteria were used in the evaluation of encroachment trees:

- Oak tree encroachment: 5 feet of dripline or 15 feet of the trunk, whichever is greater
- Mature tree encroachment: 5 feet of dripline or 25 feet of the trunk, whichever is greater

A summary of project-related tree impacts is presented in Section 3.5, Project-Related Impacts, and impact determination status for each tree recorded in the tree survey area is provided in Appendix B and Appendix C.

2.3 Scope of Work Limitations

This report presents tree information as observed in the field. No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed. Various access issues including private property and terrain rendered parts of the project site inaccessible. In these cases, data were visually estimated from a distance where possible.

3 Findings/Results

3.1 Inventory Summary – All Trees

The field survey recorded 2,656 trees within the survey area, including 2,350 oak trees and 306 non-oaks. Of the 2,656 total trees, 2,041 oak trees (1,368 protected oak trees and 673 heritage oak trees) and 36 mature trees are subject to regulation under the City's Municipal Code. The location of the inventoried trees is depicted in Appendix A, and individual tree attributes are detailed in Appendix B. Table 2 provides a summary of the species mapped within the tree survey area.

As presented in Appendix B, of the 2,656 total trees, 72 (2.71%) trees display good health, 1,172 (44.13%) trees display fair health, 531 (19.99%) trees display poor health, 406 (15.29%) trees display critical health, and 475 (17.88%) trees are dead. Of the 2,656 total trees, 10 (0.38%) trees display good structure, 1,186 (44.65%) trees display fair structure, 817 (30.76%) trees display poor structure, 168 (6.33%) trees display critical structure, and 475 (17.88%) trees are dead. Trees in the tree survey area vary in size and stature. Aggregate trunk diameters of the trees within the tree survey area range for single-stemmed trees from 0 inches for a dead tree to 78 inches, and for multi-stemmed trees from 1.41 inches to 52.06 inches (calculated using the square root of the sum of each individual stem DSH squared). Tree heights vary from 0 feet for dead trees and stump resprouts to 75 feet. Tree crown extents range from 0 feet for dead trees and stump resprouts to 55 feet at their widest location.

3.2 Oak Tree Summary

Dudek's arborists recorded a total of 2,350 oak trees on the project site. Of the 2,350 oak trees, 2,041 oak trees are regulated as "protected" or "heritage" under the City's Municipal Code. The 2,041 regulated oak trees consist of 1,368 protected oak trees and 673 heritage oak trees. Table 3 provides a summary of the oak trees mapped within the tree survey area.

As presented in Appendix B, of the 2,350 total oak trees, 63 (2.68%) trees display good health, 1,023 (43.53%) trees display fair health, 442 (18.81%) trees display poor health, 352 (14.98%) trees display critical health, and 470 (20.00%) trees are dead. Of the 2,350 total oak trees, 8 (0.34%) trees display good structure, 1,013 (43.11%) trees display fair structure, 712 (30.30%) trees display poor structure, 147 (6.26%) trees display critical structure, and 470 (20.00%) trees are dead.

Of the 2,041 protected and heritage oak trees, 61 (2.99%) trees display good health, 852 (41.74%) trees display fair health, 397 (19.45%) trees display poor health, 314 (15.38%) trees display critical health, and 417 (20.43%) trees are dead. Of the 2,041 protected and heritage oak trees, 8 (0.39%) trees display good structure, 858 (42.04%) trees display fair structure, 627 (30.72%) trees display poor structure, 131 (6.42%) trees display critical structure, and 417 (20.43%) trees are dead.

Table 2. Summary of Existing Trees

Scientific Name	Common Name	Protected Oak Trees	Heritage Oak Trees	Mature Trees	Non-Jurisdictional Trees	Total
Quercus agrifolia	Coast live oak	427	648	N/A	45	1,120
Quercus berberidifolia	Scrub oak	941	25	N/A	264	1,230
Ailanthus altissima	Tree of heaven	N/A	N/A	—	14	14
Carya spp.	Hickory	N/A	N/A	1	—	1
Cedrus deodara	Deodar cedar	N/A	N/A	3	—	3
Ceratonia siliqua	Carob	N/A	N/A	1	—	1
Eucalyptus globulus	Blue gum	N/A	N/A	4	1	5
Fraxinus dipetala	California ash	N/A	N/A	—	6	6
Fraxinus uhdei	Shamel ash	N/A	N/A	1	1	2
Fraxinus velutina	Velvet ash	N/A	N/A	—	1	1
Ligustrum lucidum	Glossy privet	N/A	N/A	—	2	2
Malosma laurina	Sumac	N/A	N/A	—	8	8
Melia azedarach	Chinaberry	N/A	N/A	4	11	15
Olea europaea	Olive	N/A	N/A	7	165	172
Pinus halepensis	Aleppo pine	N/A	N/A	2	—	2
Pinus pinea	Italian stone pine	N/A	N/A	1	—	1
Pistacia chinensis	Chinese pistache	N/A	N/A	—	2	2
Populus fremontii	Cottonwood	N/A	N/A	—	2	2
Rhus integrifolia	Lemonade berry	N/A	N/A	—	3	3
Robinia pseudoacacia	Black locust	N/A	N/A	—	11	11
Salix spp.	Willow	N/A	N/A	—	1	1
Sambucus nigra	Elderberry	N/A	N/A	2	33	35
Schinus molle	Peruvian pepper	N/A	N/A	7	4	11
Tamarix aphylla	Athel tamarisk	N/A	N/A	1	2	3
Washingtonia robusta	Mexican fan palm	N/A	N/A	1	—	1
Unknown	Unknown	N/A	N/A	1	3	4
	Total	**1,368**	**673**	**36**	**579**	**2,656**

Note: N/A = not applicable.

Table 3. Summary of Existing Oak Trees

Scientific Name	Common Name	Protected Oak Trees	Heritage Oak Trees	Non-Jurisdictional Oak Trees	Total
Quercus agrifolia	Coast live oak	427	648	45	1,120
Quercus berberidifolia	Scrub oak	941	25	264	1,230
	Total	**1,368**	**673**	**309**	**2,350**

Oak trees in the tree survey area vary in size and stature. Of the 2,350 total oak trees, trunk diameters range for single-stemmed trees from 0 inches for a dead tree to 78 inches, and for multi-stemmed trees from 1.41 inches to 52.06 inches (calculated using the square root of the sum of each individual stem DSH squared). Tree heights vary from 0 feet for dead trees and a stump resprout to 55 feet. Tree crown extents range from 0 feet for dead trees and a stump resprout to 55 feet at their widest location.

Of the 2,041 protected and heritage oak trees, trunk diameters range for single-stemmed trees from 2 inches to 78 inches, and for multi-stemmed trees from 2 inches to 52.06 inches (calculated using the sum of each individual stem DSH squared). Tree heights vary from 0 feet for dead trees and a stump resprout to 55 feet. Tree crown extents range from 0 feet for dead trees and a stump resprout to 55 feet at their widest location.

3.3 Non-Oak Tree Summary

Dudek's arborists recorded 306 non-oak trees, of which 36 are considered mature and are regulated under the City's Municipal Code. Table 4 provides a summary of the non-oak species mapped within the tree survey area.

Table 4. Summary of Existing Non-Oak Trees

Scientific Name	Common Name	Mature Trees	Non-Jurisdictional Trees	Total
Ailanthus altissima	Tree of heaven	—	14	14
Carya spp.	Hickory	1	—	1
Cedrus deodara	Deodar cedar	3	—	3
Ceratonia siliqua	Carob	1	—	1
Eucalyptus globulus	Blue gum	4	1	5
Fraxinus dipetala	California ash	—	6	6
Fraxinus uhdei	Shamel ash	1	1	2
Fraxinus velutina	Velvet ash	—	1	1
Ligustrum lucidum	Glossy privet	—	2	2
Malosma laurina	Sumac	—	8	8
Melia azedarach	Chinaberry	4	11	15
Olea europaea	Olive	7	165	172
Pinus halepensis	Aleppo pine	2	—	2
Pinus pinea	Italian stone pine	1	—	1
Pistacia chinensis	Chinese pistache	—	2	2
Populus fremontii	Cottonwood	—	2	2

Table 4. Summary of Existing Non-Oak Trees

Scientific Name	Common Name	Mature Trees	Non-Jurisdictional Trees	Total
Rhus integrifolia	Lemonade berry	—	3	3
Robinia pseudoacacia	Black locust	—	11	11
Salix spp.	Willow	—	1	1
Sambucus nigra	Elderberry	2	33	35
Schinus molle	Peruvian pepper	7	4	11
Tamarix aphylla	Athel tamarisk	1	2	3
Washingtonia robusta	Mexican fan palm	1	—	1
Unknown	Unknown	1	3	4
	Total	**36**	**270**	**306**

Note: N/A = not applicable.

As presented in Appendix B, of the 306 total non-oak trees, 9 (2.94%) trees display good health, 149 (48.69%) trees display fair health, 89 (29.08%) trees display poor health, 54 (17.65%) trees display critical health, and 5 (1.63%) trees are dead. Of the 306 total non-oak trees, 2 (0.65%) trees display good structure, 173 (56.54%) trees display fair structure, 105 (34.31%) trees display poor structure, 21 (6.86%) trees display critical structure, and 5 (1.63%) trees are dead.

Of the 36 mature non-oak trees, 7 (19.44%) trees display good health, 24 (66.67%) trees display fair health, 2 (5.56%) trees display poor health, 2 (5.56%) trees display critical health, and 1 (2.78%) tree is dead. Of the 36 mature non-oak trees, 2 (5.56%) trees display good structure, 23 (63.89%) trees display fair structure, 7 (19.44%) trees display poor structure, 3 (8.33%) trees display critical structure, and 1 (2.78%) tree is dead.

Non-oak trees in the tree survey area vary in size and stature. Of the 306 total non-oak trees, trunk diameters for single-stemmed trees range from 4 inches to 38 inches, and for multi-stemmed trees from 5.20 inches to 39.47 inches (calculated using the sum of each individual stem DSH squared). Tree heights vary from 4 feet to 75 feet. Tree crown extents range from 5 feet to 45 feet.

Of the 36 mature trees, trunk diameters for single-stemmed trees range from 24 inches to 38 inches, and for multi-stemmed trees from 24.84 inches to 39.47 inches (calculated using the sum of each individual stem DSH squared). Tree heights vary from 10 feet to 75 feet. Tree crown extents range from 12 feet to 45 feet.

3.4 Inventory Summary

Of the total 2,656 trees surveyed, the City regulates 2,077 trees, including 673 heritage oak trees, 1,368 protected oak trees, and 36 mature non-oak trees.

3.5 Project-Related Impacts

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for this project include trees occupying protected zones within the proposed improvement and disturbance areas as defined in the grading plan (dated July 2023). The impact discussion in this section identifies all impacts anticipated to result to trees regulated by the

City based on an evaluation of tree locations compared with the project site plan. Much of the survey area will be developed for uses including residential, mixed use/commercial, and business industrial areas. Trees identified for retention and removal are graphically presented in the Tree Impact Exhibit (Appendix C).

Direct impacts to trees on construction sites are typically the result of physical injuries or changes caused by machinery involved with the development process. Direct impacts include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds to preserved trees or project limit edge trees. Indirect impacts to trees are the result of changes to the site that may cause tree decline, even when the tree is not directly injured. Both large-scale site topography alterations and specific changes that occur around trees are important considerations. Site-wide changes affecting trees can include changes in stormwater surface flow hydrology; lowering, raising, or altering groundwater tables; altering the capacity for soil moisture recharge; and removing vegetation (Matheny and Clark 1998).

Impacts to trees can be cumulative, and without proper site design and long-term woodland management, a series of changes and site manipulations can occur that require the tree to respond and adapt. The initial impacts often occur during vegetation clearing, when tree roots are likely to be injured and the site microclimate altered. Additional changes and tree damage may occur during grading and infrastructure installation. The next phase, construction of adjacent structures, may cause yet another series of tree impacts. Finally, finish grading and landscaping may further impact the trees and alter their natural environment. Examples of the most common detrimental practices can be seen in a typical attempt to incorporate existing naturally occurring oaks into the landscape of a new subdivision or development, or for preserved trees adjacent the grading envelope, without assuring that alterations in site hydrology and future urban runoff are designed to prevent excessive watering of oaks. Pruning and collisions with vehicles and construction equipment can wound the aboveground parts of oak trees. These wounds serve as entry points for various fungi that cause cankers and wood decay and that are attractive to some wood-boring insects. In addition to these visible wounds, damage that is much more serious is commonly inflicted to tree roots. Many of a tree's roots are relatively shallow and extend well beyond the edge of the canopy. Grading, trenching, soil compaction and over-watering routinely destroy oaks on poorly planned projects. Loss of roots can subject an oak to severe stress, which increases its susceptibility to diseases and insects. On the project site, the majority of the tree impacts will be associated with tree removal during the mass grading project phase. In order to provide a conservative, "worst-case" impact analysis, preserved edge-adjacent trees are also considered impacted and will be mitigated, although in many instances, protection measures provided in this plan will allow these trees to survive grading.

Site development often presents threats to trees outside of the development footprint. The most common threats include inadvertent injury to roots (by trenching) or branches (by pruning), changes in hydrology due to recontouring, and impacts due to irrigation and urban runoff. Collectively, these impacts can stress trees and woodlands to the point where they can become predisposed to insects or disease. Given proper planning and implementation designed and overseen by knowledgeable arborists/foresters, as is planned for the project, however, these cumulative indirect impacts would not be expected to cause significant or long-term adverse impacts to woodlands outside of the maximum grading line.

There is a great deal of variation in tolerance to construction impacts among tree species, ages, and conditions. These characteristics must be evaluated in order to predict how a tree or woodland may respond to changes in the growing environment. In general, healthy trees will respond more readily to changes in their growing environment. Trees in poor health or stressed conditions may not be vigorous enough to cope with direct or indirect impacts from construction activities. Likewise, young trees typically respond more favorably to construction impacts than do mature trees.

3.5.1 Project-Related Direct Impacts

Based on the 2023 Land Use Plan (City of Calimesa 2023a) for the proposed project, it is estimated that 1,579 total trees will be removed. Of the total 1,579 removals, 1,152 (887 protected oak trees, 250 heritage oak trees, and 15 mature non-oak trees) regulated trees will be removed. Furthermore, 141 trees have their protected zones encroached. Of the 141 total encroachments, 126 (50 protected oak trees, 70 heritage oak trees, 6 mature non-oak trees) regulated trees will be encroached. The remaining trees will remain in place. Table 5 summarizes impact determinations for regulated trees within the tree survey area that are subject to regulation under the City's Municipal Code.

Table 5. Summary of Regulated Tree Impact Determinations

Scientific Name	Common Name	On-Site Impact Determinations			Off-Site Impact Determinations			Outside Project Boundary Impact Determinations			Total
		Removal	Encroachment	No Impact	Removal	Encroachment	No Impact	Removal	Encroachment	No Impact	
Quercus agrifolia	Coast live oak	304	80	498	68	–	–	–	20	105	1,075
Quercus berberidifolia	Scrub oak	667	14	114	98	–	–	–	6	67	966
Carya spp.	Hickory	–	–	–	–	–	–	–	–	1	1
Cedrus deodara	Deodar cedar	–	–	–	–	–	–	–	3	–	3
Ceratonia siliqua	Carob	1	–	–	–	–	–	–	–	–	1
Eucalyptus globulus	Blue gum	2	1	–	–	–	–	–	–	1	4
Fraxinus uhdei	Shamel ash	–	–	–	–	–	–	–	–	1	1
Melia azedarach	Chinaberry	3	–	–	1	–	–	–	–	–	4
Olea europaea	Olive	7	–	–	–	–	–	–	–	–	7
Pinus halepensis	Aleppo pine	–	–	–	–	–	–	–	–	2	2
Pinus pinea	Italian stone pine	–	–	–	–	–	–	–	1	–	1
Sambucus nigra	Elderberry	–	–	2	–	–	–	–	–	–	2
Schinus molle	Peruvian pepper	–	–	–	–	–	–	–	1	6	7
Tamarix aphylla	Athel tamarisk	1	–	–	–	–	–	–	–	–	1
Washingtonia robusta	Mexican fan palm	–	–	1	–	–	–	–	–	–	1
Unknown	Unknown	–	–	1	–	–	–	–	–	–	1
	Total Trees	**985**	**95**	**616**	**167**	**–**	**–**	**–**	**31**	**183**	**2,077**

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3.5.2 Project-Related Indirect Impacts

Possible indirect impacts to trees near the proposed development include hydrological and human-caused alterations. The woodlands management goal would be to adequately design drainage systems, desilting basins, culverts, and piping to minimize indirect impacts to trees outside the grading limits by maintaining soil moisture and runoff at current levels. Trees within and adjacent to the remaining natural drainages in the vicinity of the project would need to receive flows from precipitation events after the proposed development comparable to flows currently received. Trees within drainages that would be cut off from natural upstream flow by development are not expected to receive stream flow comparable to what they currently receive. Trees in these areas will only receive water from rainfall or runoff from the developed area upstream, as the proposed development drainage system is expected to deliver stormwater in excess of natural condition flows to storm drain systems off site. These trees will require engineering solutions such that flows remain consistent with current levels.

Other types of potential indirect impacts to trees from the proposed project are human-caused impacts. These impacts are the result of an increased number of people living near oak woodlands. Activities in wooded areas like those outside the development footprint may include firewood harvesting and hiking, both of which cause denuded growing environments due to soil compaction, along with seedling trampling and exotic species introduction. Other potential human-caused indirect impacts include littering, vandalism, and deliberate or accidental wildfire ignition. These are all potential indirect impacts associated with development that may negatively impact the preserved/avoided oak resources. The indirect impacts can be minimized through tree and woodland management and protection.

A total of 936 trees occur in areas well outside the proposed impact area and would not be directly impacted by the project but may be subject to indirect impacts described in the preceding paragraphs.

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4 Mitigation Requirements and Recommendations

These proposed mitigation recommendations have been designed to provide mitigation for potential impacts (removals and encroachments) associated with the proposed project, affecting up to 1,257 regulated oak trees and 21 mature trees. Likewise, it is assumed that the mitigation program outlined herein is applicable to the impacts presented by the proposed project; where it is possible to reduce tree and woodland impacts through planning and other efforts, mitigation measures will be reduced proportionally.

The mitigation recommendations are presented to provide a way to mitigate the potential loss of tree resources in a manner that emphasizes repairing the natural regeneration capabilities of the oak woodlands, to restore and improve forest diversity and value on a long-term basis.

The goal of the proposed mitigation program is to provide high-quality and measurable mitigation for the impacts to oak and mature trees on the property. The mitigation program is designed to be consistent with the City's mitigation requirements for oak trees and focuses on woodland enhancement. The result of these mitigation recommendations will be the creation and preservation of a sustainable, naturally regenerating system of oak woodlands that has a higher overall level of quality and quantity than the tree resources that currently exist on the property.

4.1 Mitigation Requirements

The City's Municipal Code mitigation requirements for oak trees impacts associated with development projects are summarized as follows (City of Calimesa Municipal Code Section 18.80.060):

> An effective combination of replacement trees, acorns, and/or appropriate mitigation will be planted or provided.
>
> a. Trees to be removed shall be replaced at a minimum replacement ratio of one tree for each tree removed or nine acorns planted for each tree removed.
> b. Mitigation other than replacement shall include the payment of replacement costs to replace each tree that is removed as determined by the oak tree assessment.

Any mature non-oak removal must be replaced with a 36-inch box specimen tree. Replacement tree species should be selected from a list of pre-approved species provided by the City.

4.2 Mitigation Recommendations

Based on the City's Municipal Code, an effective combination of replacement trees, acorns, and/or appropriate mitigation will be planted or provided. At a minimum, the City requires protected and heritage oak trees to be replaced at a ratio of one tree for each tree removed or nine acorns planted for each tree removed. Furthermore, the City requires the replacement of mature trees with a 36-inch box specimen tree at a 1:1 ratio. As such, based on the City's requirements, a minimum of 1,257 15-gallon or 24-inch oak trees (472 coast live oaks [*Quercus agrifolia*] and 785 scrub oaks) or 11,313 acorns (4,248 coast live oak acorns and 7,065 scrub oak acorns) and 21

36-inch box trees (species from pre-approved City list) will be necessary. However, the simple, straightforward replacement of a tree by multiple larger trees is generally best suited to scenarios where the impacted oaks are easily viewable by or accessible to the public and aesthetic concerns are paramount. But this is not the issue with respect to the wildland oaks on the project site. The positions of most of the trees on remote hillsides and canyons make them less of a community aesthetic benefit and almost exclusively a wildlife resource. This wildlife resource cannot be replaced exclusively by planting container stock in park or urban settings. Rather, the wildlife and plant resource impacts must also be addressed through enhancement and creation of natural woodland communities, in this case oak woodland, riparian forest, and various other plant communities. Consequently, the in-kind replacement of the wildland trees at the project site is best satisfied through enhancing and creating conditions supportive of natural regeneration and the establishment of varied sizes of replacement oaks, ranging from acorns to large, boxed specimens, in association with other native plant species known to naturally coexist with coast live oak trees on hillsides and in open space areas.

Thus, the goal of the mitigation program recommended for this project is the creation of a landscape that maximizes the compensation for lost habitat values while fully addressing the need to provide a community landscape that reflects the natural heritage of the property. The required plan will need to address the specific planting locations of the required, recommended, and approved mitigation trees, along with specifications for site preparation, tree planting, tree maintenance, and long-term monitoring. The recommendations provided within this report are intended to meet the mitigation requirements of the City and provide mitigation recommendations that will enhance the existing and preserved/avoided oak woodlands and open space areas and provide trees throughout the developed landscape. However, a detailed tree replacement, mitigation, and monitoring plan will be required by the City and the following tree planting recommendations may be superseded by the mitigation requirements previously stated.

To maximize the compensation for lost habitat values and address the need to provide a community landscape that reflects the natural heritage of the property, Dudek recommends the planting of a mixture of acorns, 1-gallon, 15-gallon, 24-inch box, 36-inch box, 48-inch box, and 60-inch box trees to mitigate the removal and encroachment of 1,257 heritage and protected oak trees and 21 mature trees. Specifically, to mitigate the removal and encroachment of 1,257 heritage and protected oak trees, Dudek recommends planting at a minimum 3,394 acorns, 251 1-gallon trees, 189 15-gallon trees, 189 24-inch box trees, 126 36-inch box trees, 63 48-inch box trees, and 63 60-inch box trees. It is recommended that the 3,394 acorns, 251 1-gallon trees, and 189 15-gallon trees be planted within the site's remaining oak woodlands and open space areas and that the 189 24-inch box trees, 126 36-inch box trees, 63 48-inch box trees, and 63 60-inch box trees be incorporated into the site's developed landscape, parks, and street master plan. The recommended replacement plan results in a 1:1 tree replacement ratio/9:1 acorn replacement ratio with a mixture of a variety of oak tree age classes, whereas the City's 1:1 mitigation ratio results in a single age class of either 15-gallon or 24-inch box trees. Age diversity within a forest or woodland is critical to its future success and resiliency against pests, disease, and climate change. According to the U.S. Forest Service, "forest stands with a combination of widely scattered individuals, clusters of mixed age trees, and open spaces may increase forest resilience (North et al. 2019). Maintaining a mix of species, ages, sizes, or canopy positions will help buffer vulnerability to stressors of any single age class, as well as increase structural diversity within stands or across a landscape (Noss 2001)" (USFS 2023).

In addition to the replacement recommendations provided above, to mitigate the removal/encroachment of 21 mature trees, Dudek recommends planting a minimum of 21 36-inch box trees within the site's developed landscape. It is furthermore recommended that all oak tree seedlings and saplings be collected and grown from

acorns collected on site to ensure that oak seedlings will have the best genetic adaptation for the Mesa Verde development area.

Based on a review of the site's proposed Landscape Environment section of the Mesa Verde Specific Plan Area 2 Amendment 2 (City of Calimesa 2023b), the site's post-construction environment can support, at a minimum, the required 1,278 (1,257 heritage and protected oak and 21 mature trees) mitigation trees. For additional details on the landscape design criteria and landscape master plan, please refer to the Mesa Verde Specific Plan Area 2 Amendment 2 (City of Calimesa 2023b). The Mesa Verde Specific Plan Area 2 Amendment 2 provides details on the landscape design criteria, streetscape master plan, and specific planting guidelines for the community.

It is recommended that a tree restoration, maintenance, and monitoring plan be prepared and approved by the City prior to the issuance of grading permits. This plan shall detail long-term maintenance and monitoring for trees planted within and directly adjacent to the project site. This plan shall also require that the homeowners association contract and fund a Certified Arborist for long-term monitoring with authority in decisions regarding tree care and maintenance. The plan shall also have requirements for funding replacement tree planting procedures, if necessary.

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5 Tree Protection and Monitoring

The City's Municipal Code requires retained/avoided and replacement trees to be in an area that will be maintained in such a manner as to ensure their long-term health, as well as the establishment of a program to monitor and report on the survival rate of replaced trees to ensure the long-term success of a tree preservation and replacement plan (City of Calimesa Municipal Code Section 18.80.060). As such, the following tree protection and monitoring measures are recommended for implementation to ensure the long-term health of retained/avoided and replacement trees. Specifically, it is recommended that the following measures are implemented prior to, during, and following construction. This includes measures such as exclusion fencing and worker training to avoid direct impacts to trees and measures such as irrigation and monthly inspections by an arborist to promote the long-term health of retained/avoided trees. Arborist monitoring during construction when encroachments into tree protection zones would occur is also recommended to minimize root disturbance and determine the best course of actions for root pruning, supplemental irrigation, branch trimming, or other measures to minimize impacts from ground-disturbing and other potential impactful activities.

5.1 Tree Protection Measures Prior to Construction

Trees on the property that fall within 300 feet of construction activity, if any, shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures.

5.1.1 Pre-Construction Meeting

A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground shall provide written acknowledgment that they have received tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

5.1.2 Fencing

A 4-foot-high, orange-webbing, polypropylene barricade fence with tree protection signs shall be erected around all trees (or tree groups) to be preserved/avoided. The protective fence should be installed a minimum of 12 feet from preserved/avoided trees all the way around to prevent root damage by grading equipment. A Certified Arborist may be required on site if grading activities will occur within the 12-foot radius. The fencing will delineate the tree protection area and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. The fence webbing shall be secured to 6-foot, heavy-gauge T-bar line posts, pounded into the ground a minimum of 18 inches and spaced 8 feet on-center. Fence webbing shall be attached to T-bar posts with minimum 14-gauge wire fastened to the top, middle, and bottom of each post. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

5.2 Tree Protection Measures During Construction

Once construction activities have begun, the following measures shall be adhered to.

5.2.1 Equipment Storage and Operation

Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced tree protection zone, unless where specifically approved in writing and under the supervision of a Certified Arborist.

5.2.2 Storage and Disposal

Do not store or discard any supply or material, including paint, lumber, or concrete overflow, within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

5.2.3 Grade Changes

Grade changes, including adding fill, are not permitted within the tree protection zone without special written authorization and under supervision by a Certified Arborist. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further and decrease both water and air availability to the trees' roots.

5.2.4 Moving Construction Materials

Be careful when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Aboveground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with high visibility flagging, such as florescent red or orange. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA standards.

5.2.5 Root Pruning

Except where specifically approved in writing, all trenching shall be outside of the fenced protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree, similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may result in tree loss. The trench should be made no deeper than necessary.

5.2.6 Irrigation

Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first 12 months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every 2 weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary aboveground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone. Native desert trees are dormant during summer but will require irrigation at least monthly and as indicated by the trees' canopy health.

5.2.7 Root Stimulant

With the first irrigation (within 48 hours after root pruning), add the liquid root stimulant "Root Concentrate." This product helps the tree to regenerate root growth. Application of this product is best achieved in a diluted state via the use of a water truck. Follow Root Concentrate label instructions.

5.2.8 Pruning

Do not prune any of the trees until all construction is completed unless standard pruning would reduce conflict between canopy and equipment. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of a Certified Arborist and using ISA guidelines.

5.2.9 Washing

During construction, wash foliage of adjacent trees with a strong water stream every 2 weeks before 10:00 a.m. to control mite and insect populations.

5.2.10 Inspection

A Certified Arborist shall inspect the impacted trees monthly during construction. A report comparing tree health and condition to the original, pre-construction baseline shall be submitted following each inspection. Photographs of each tree are to be included in the report on a minimum annual basis.

5.3 Tree Protection Measures Following Construction

Once construction is complete, the fencing may be removed and the following measures must be performed to sustain and enhance the vigor of the trees.

5.3.1 Mulch

Maintain the natural duff layer under all trees and add organic mulch to a depth of 4 inches where possible. This will stabilize soil temperatures in root zones, conserve soil moisture, and reduce erosion. Mulch should be kept clear of the trunk base to avoid creation of pathogen-friendly soil conditions in this susceptible region.

5.3.2 Pruning

The trees will not require regular pruning. Pruning should only be done to maintain clearance and remove broken, dead, or diseased branches. Pruning shall only take place following a recommendation by a Certified Arborist and performed under the supervision of a Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA standards.

5.3.3 Watering/Irrigation

The trees should not require regular irrigation, other than the 12 months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary.

5.3.4 Watering/Irrigation of Adjacent Plant Materials

All plants near the trees shall require moderate to low levels of water. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet. Irrigation spray shall not hit the trunk of any tree. A 30-inch dry zone shall be maintained around all tree trunks. An aboveground micro-spray irrigation system is recommended over typical underground pop-up sprays.

5.3.5 Chemical Applications

If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, a Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed pest control applicator under the direction of a licensed pest control advisor.

5.4 Monitoring

To ensure the continued success of the newly planted trees, encroached-upon trees, and preserved/avoided trees, the following monitoring activities are recommended.

5.4.1 Encroachment and Preserved/Avoided Trees

Where approved development encroaches into the protected zone of native oak trees, a Certified Arborist shall determine whether ongoing monitoring is needed to ensure that the encroachment has not damaged the native tree. All work occurring within a tree's timberland production zone shall be monitored by a Certified Arborist. If ongoing monitoring is determined to be needed, an appropriate period (not to exceed 5 years) for which each affected tree shall be monitored, based upon the extent of approved disturbance within the root zone, shall be established by the Certified Arborist. An annual monitoring report shall be submitted for review by the City throughout the monitoring period specified in the monitoring plan. Should any of the trees be lost during the monitoring period because of the disturbance caused by the proposed development, the project applicant will mitigate the impacts through the planting of replacement trees as required by the City. If replacement plantings are required as mitigation, monitoring of the replacement trees shall be provided.

5.4.2 Mitigation for Replacement Trees

Per the Mesa Verde Specific Plan (City of Calimesa 2017), replacement trees must be inspected regularly by a qualified biologist or arborist:

> Where the planting of replacement trees is required as mitigation and for trees which have been relocated, a qualified biologist or arborist shall perform surveys of replacement trees, as described below.
>
> 1) First year following installation: quarterly inspections with reports as needed if problems are developing. Annual report at end of the first year following installation.
> 2) Second year: 6-month inspection and report as needed. Inspection and second annual report at end of second year.
> 3) Third year: annual inspection and report.
> 4) Fourth year: annual inspection and report,
> 5) Fifth year: annual inspection and final report (if mitigation program has met the target performance goals). The report shall be submitted for the review and approval of the City as required during the monitoring period. The monitoring report shall identify the size and health of replacement trees, comparing this information with the criteria provided in the native tree replacement-planting program to determine whether the replacement trees are healthy and growing normally. Mid-course corrections shall be recommended and implemented as necessary. If performance standards are not met by the end of the required monitoring period, the monitoring period may be extended until the standards are met.

5.4.3 Success Criteria

The Mesa Verde Specific Plan (City of Calimesa 2017) describes the success criteria of the tree impact mitigation as follows:

> Establishment of the oak woodland mitigation program will be considered successful after the following criteria are met.
>
> 1) Individual trees planted from acorns, deep one-gallon, or 15-gallon containers average a height of at least five feet.
> 2) Replacement trees as a whole have a survival rate of no less than 60 percent following one year without irrigation. Should this criterion not be met, permanent irrigation may be provided as an alternative.
> 3) Replacement trees are disease free.

As such, the replacement plan would be considered successful if the 3,394 acorns, 251 1-gallon trees, and 189 15-gallon trees average heights of at least 5 feet and at least 2,565 of the 4,275 trees/acorns survived following removal of irrigation. Newly planted trees are typically irrigated for the first 3 years, with supplemental irrigation levels being decreased annually until the trees can survive on their own. As such, 2,565 trees would need to survive beyond 4 years.

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6 Tree Permits and Applications

The project applicant will need to prepare and submit an oak tree preservation and replacement plan in conjunction with an application for an oak tree preservation and replacement permit (City of Calimesa Municipal Code Section 18.80.060). An oak tree pruning permit will be necessary if pruning of any protected oak tree, heritage oak tree, or protected stand of oak trees is to occur (City of Calimesa Municipal Code Section 18.80.040). A copy of this report and the final project site plan should accompany the application. Permits are required for cutting, damage, removal, encroachment, or relocation of any protected oak tree, any heritage oak tree, or any protected stand of oak trees (City of Calimesa Municipal Code Section 18.80.020). Additionally, a permit is required for non-oak tree removal.

Prior to the issuance of a grading permit for an area that includes native oak tree removal or encroachment into the protected zone of native oak trees, the project applicant shall submit a mitigation program prepared by a qualified biologist, arborist, or other resource specialist that specifies the number of replacement trees and their proposed approximate location and planting specifications.

The Mesa Verde Specific Plan (City of Calimesa 2017) also notes the following:

> Prior to the dedication of the Public Open Space areas to the City or other agency as approved by the City, or prior to issuance of the last Certificate of Occupancy in any Planning Area where there are preserved oak trees, a qualified biologist or arborist shall conduct a site inspection of that Planning Area to ensure that no pre-existing native oak trees that are within or adjacent to the construction area have been removed or damaged by construction activities other than those identified in the original development application. If the biologist/arborist determines that any native oak trees have been removed (other than those approved by the original development permit) or damaged by construction activities, then additional mitigation may be required.

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7 Disclosure

This arborist report provides conclusions and recommendations based only on a visual examination of the trees within the tree survey area by Certified Arborists and reasonable reliance on the completeness and accuracy of the information provided to the arborists. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and belowground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature, including, without limitation, storms of sufficient strength, which can cause a healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period of time. A tree's condition could change over a short or extended period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this arborist report nor Dudek assume any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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8 References

City of Calimesa. 2017. *Mesa Verde Specific Plan.*

City of Calimesa. 2023a. "Mesa Verde Specific Plan Land Use Plan 2023."

City of Calimesa. 2023b. *Mesa Verde Specific Plan Area 2 Amendment 2.* Updated January 2023.

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Matheny, N., and J.R. Clark. 1998. *Trees and Development: A Technical Guide to Preservation of Trees During Land Development*. International Society of Arboriculture. June 1, 1998.

USFS (U.S. Forest Service). 2023. "Promote Diverse Age Classes." Climate Change Resource Center, U.S. Department of Agriculture. Accessed March 2024March 2024. https://www.fs.usda.gov/ccrc/approach/promote-diverse-age-classes#:~:text=Species%20are%20vulnerable%20to%20stressors,a%20result%20of%20climate%20change.

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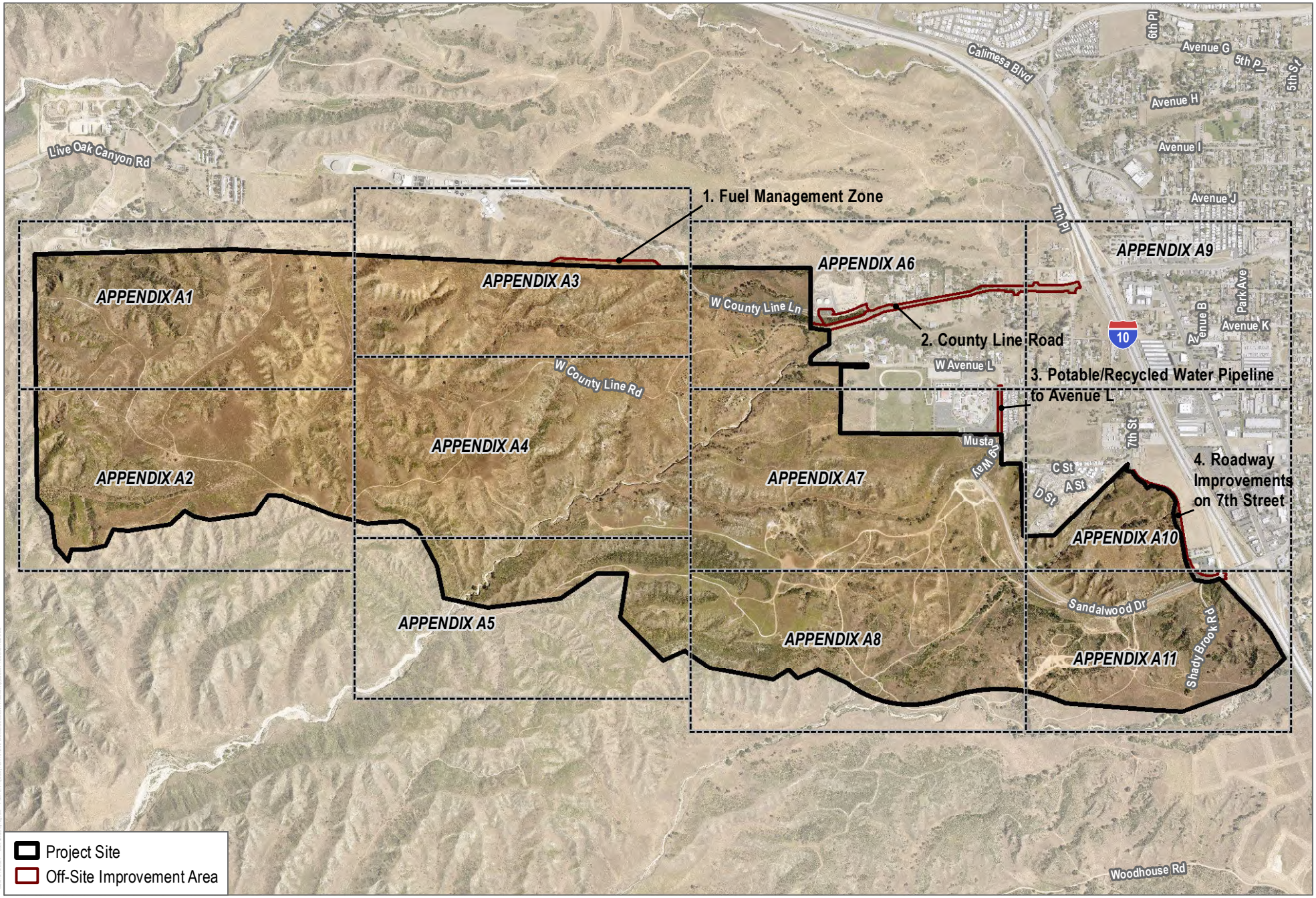
Appendix A
Individual Tree Locations



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

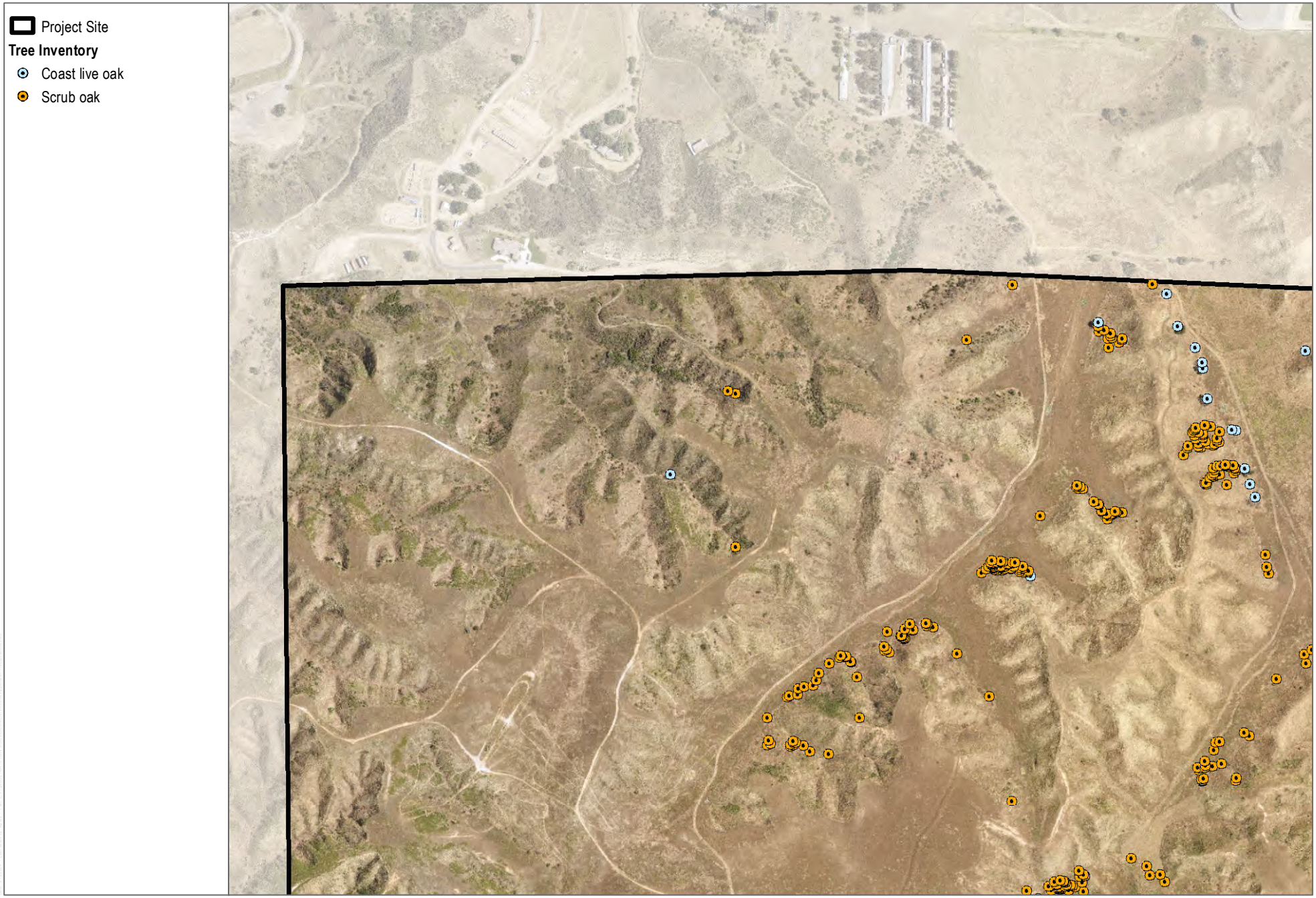
DUDEK

0 1,000 2,000 Feet

APPENDIX A

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

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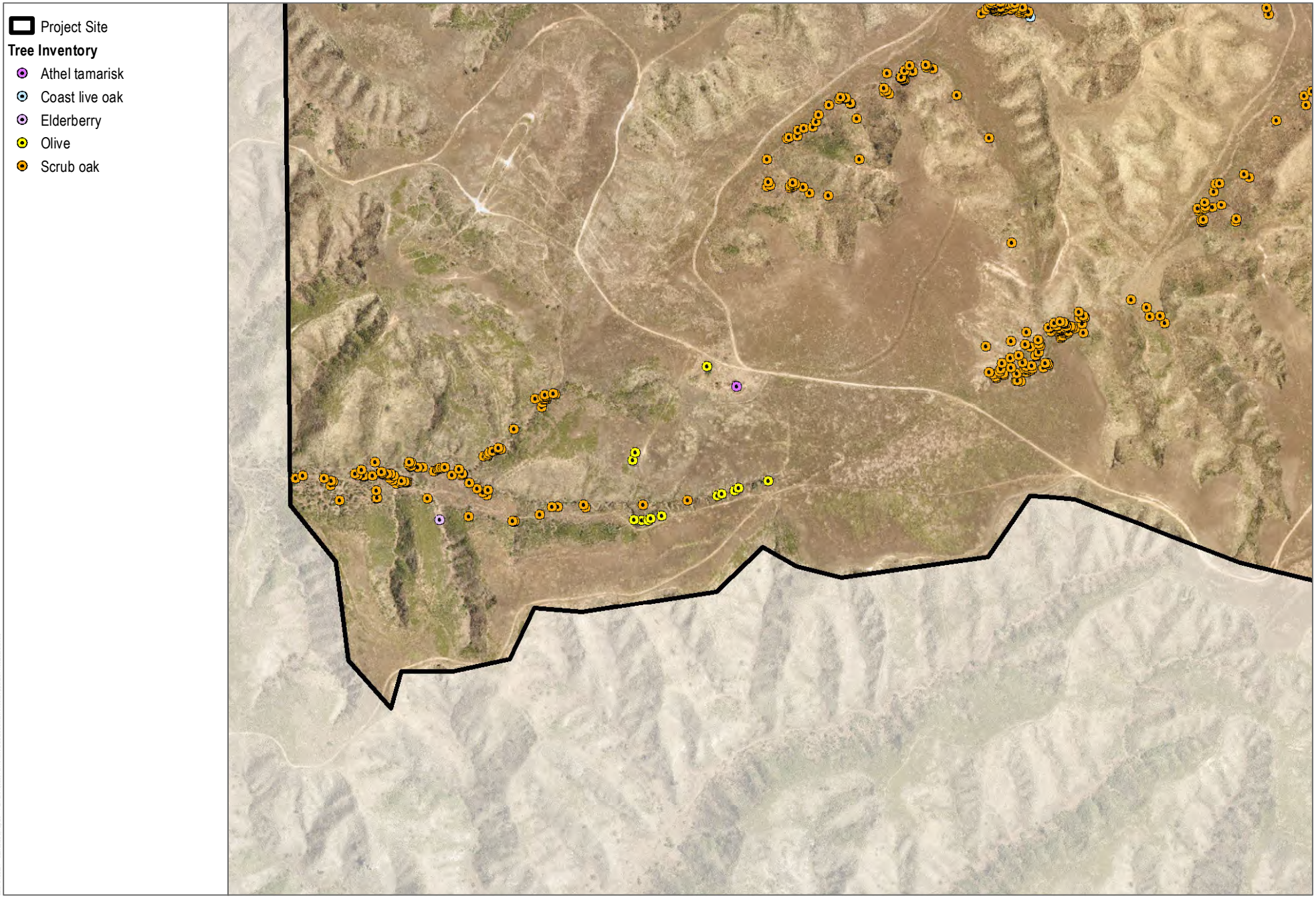
APPENDIX A1

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

DUDEK

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APPENDIX A2

Individual Tree Locations

Mesa Verde Specific Plan Project

SOURCE: Hunsaker 2024; Riverside County

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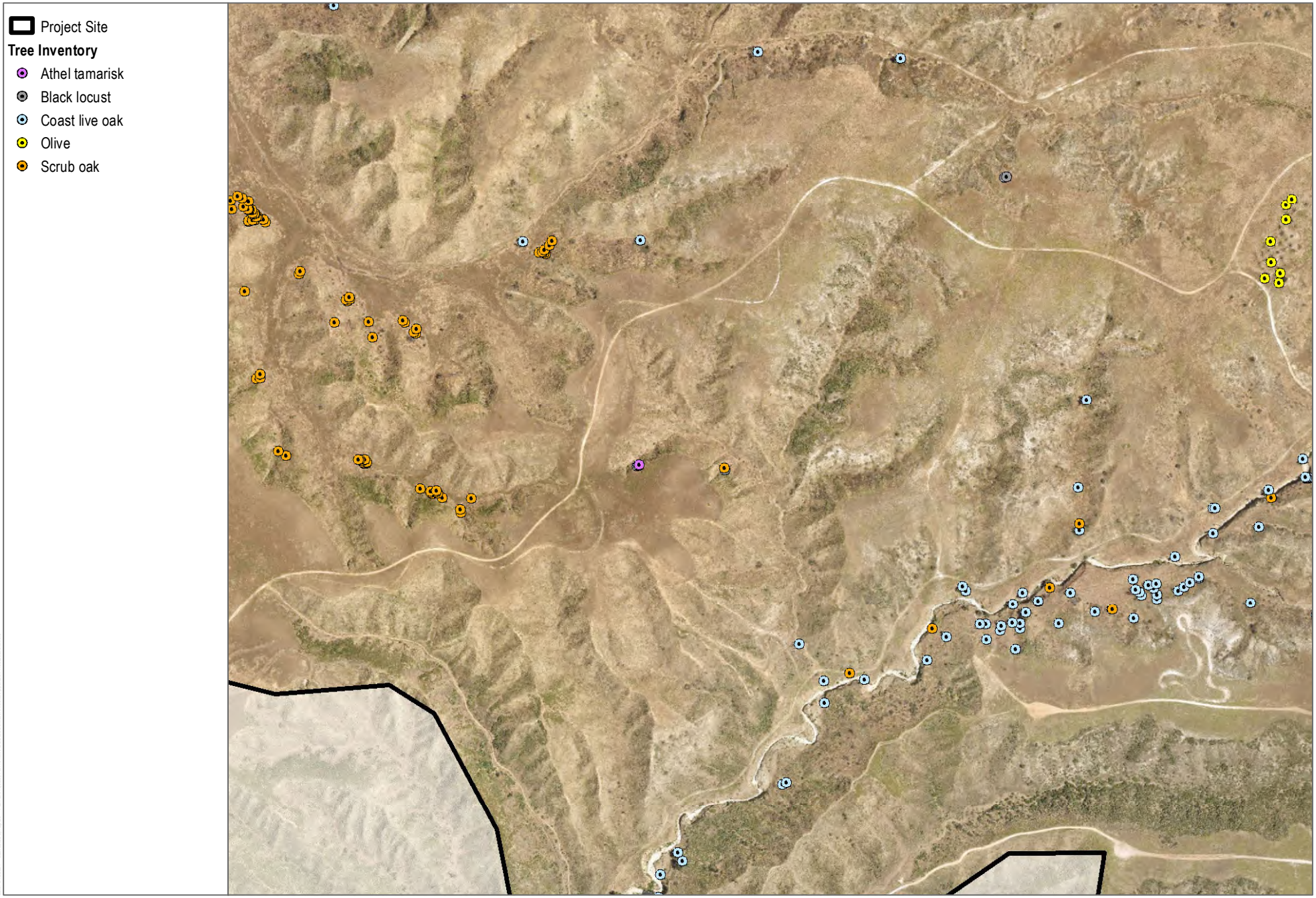
APPENDIX A3

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

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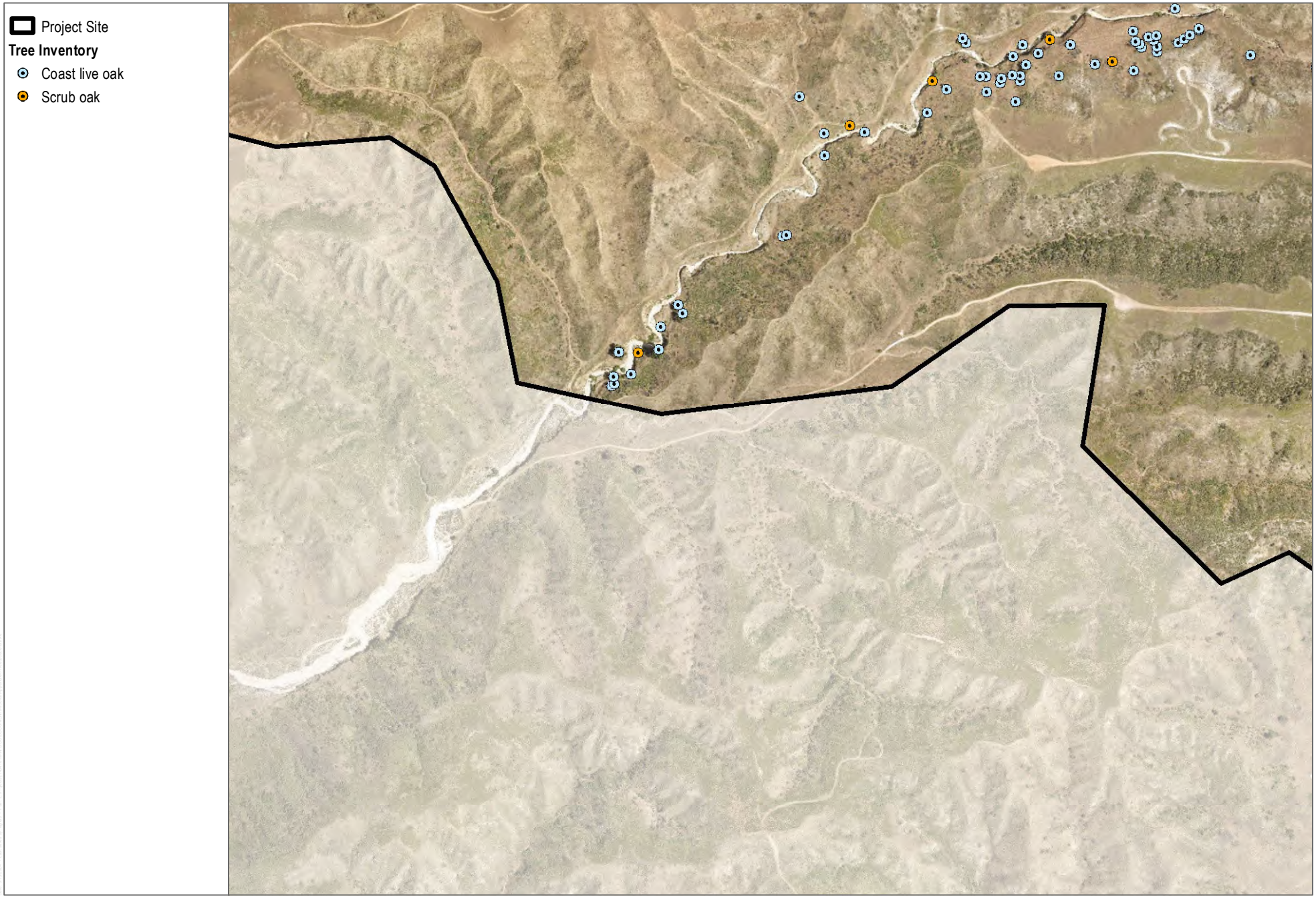
APPENDIX A4

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

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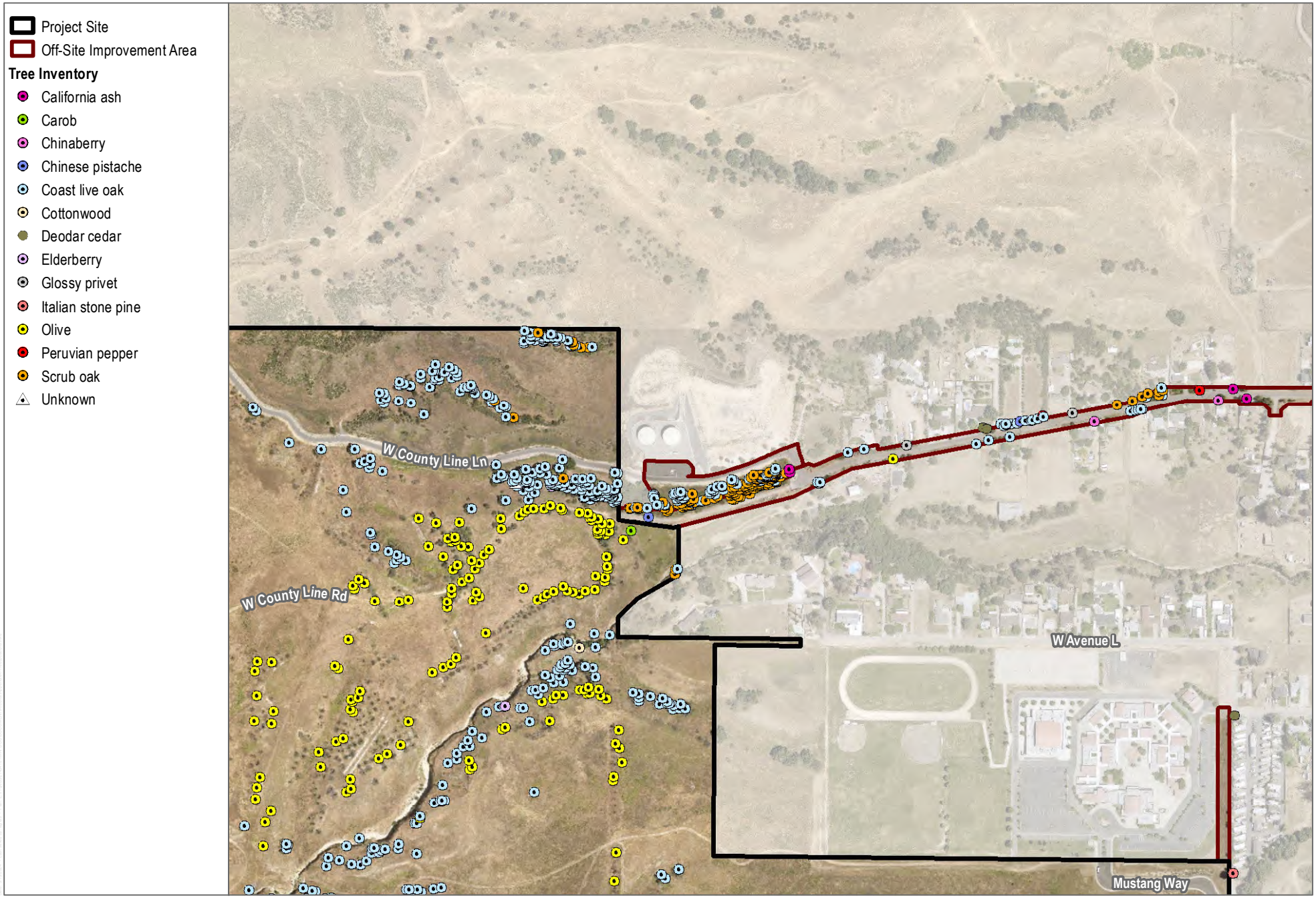
APPENDIX A5

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

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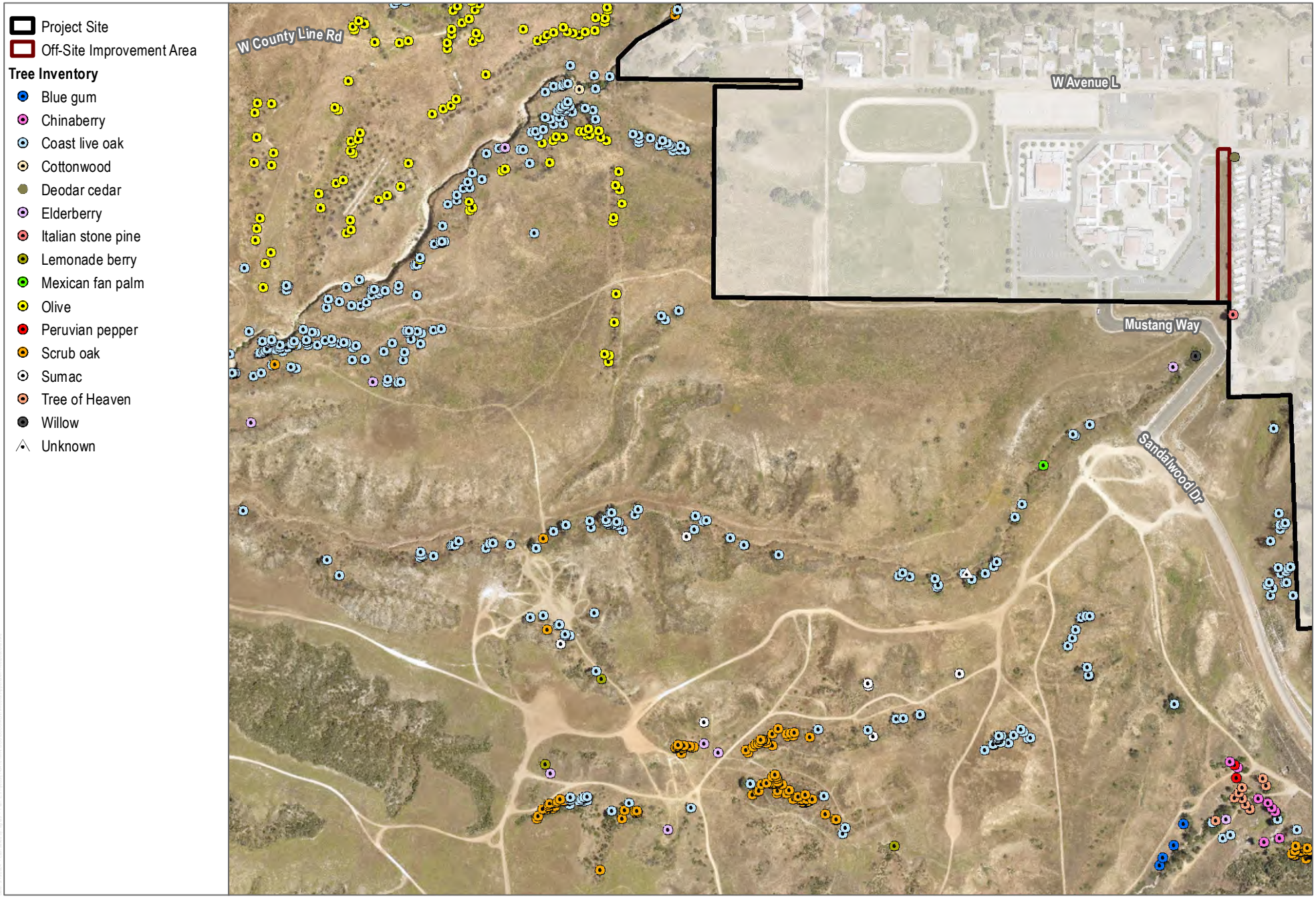
APPENDIX A6

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

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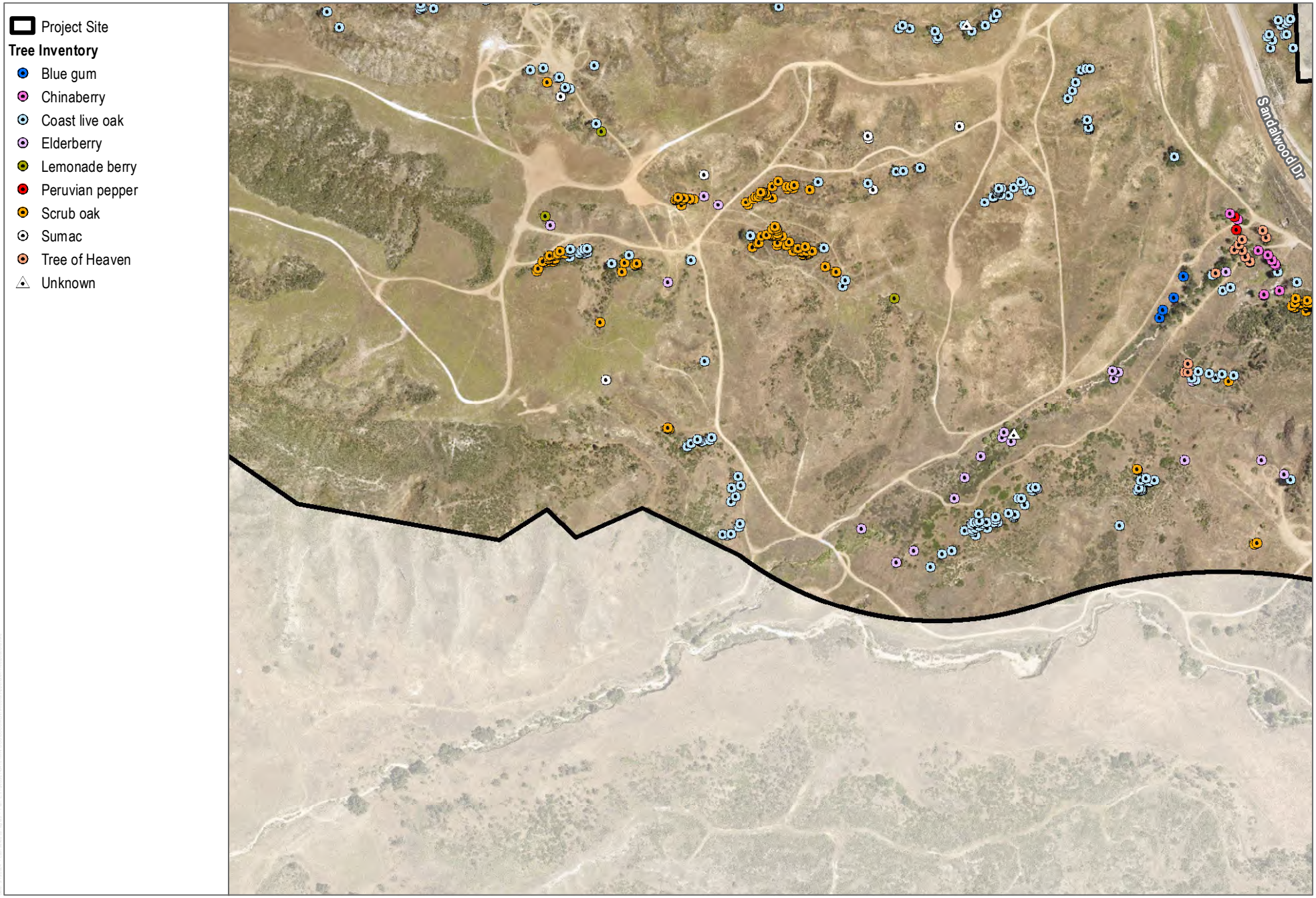
APPENDIX A7

Individual Tree Locations

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 300 600 Feet

APPENDIX A8

Individual Tree Locations

Mesa Verde Specific Plan Project

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 300 600 Feet

APPENDIX A9

Individual Tree Locations

Mesa Verde Specific Plan Project

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 300 600 Feet

APPENDIX A10

Individual Tree Locations

Mesa Verde Specific Plan Project

SOURCE: Hunsaker 2024; Riverside County

DUDEK

0 300 600 Feet

APPENDIX A11

Individual Tree Locations

Mesa Verde Specific Plan Project

Appendix B
Tree Information Matrix

Appendix B- Tree Information Matrix																	
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
0	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	no tree ID
6	*Quercus agrifolia*	Coast live oak	30	10	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
7	*Quercus agrifolia*	Coast live oak	30	15	Poor	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
43	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	78.00	78	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
45	*Quercus agrifolia*	Coast live oak	25	35	Fair	Fair	2	22.67	17	15	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
46	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	27.00	27	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	Dead
47	*Quercus agrifolia*	Coast live oak	30	35	Poor	Fair	1	26.00	26	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
48	*Quercus agrifolia*	Coast live oak	30	40	Fair	Poor	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
51	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	2	34.00	30	16	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
54	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
55	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
56	*Quercus agrifolia*	Coast live oak	30	35	Poor	Poor	4	22.32	10	9	11	14	-	-	Mesa Verde onsite	Removal	Heritage	
60	*Quercus agrifolia*	Coast live oak	25	20	Good	Fair	1	38.00	38	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
64	*Quercus agrifolia*	Coast live oak	35	45	Dead	Dead	2	40.00	32	24	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
93	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	6.71	5	4	2	-	-	-	Mesa Verde onsite	Removal	Protected	
169	*Quercus agrifolia*	Coast live oak	15	15	Critical	Poor	2	12.53	11	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
179	*Quercus agrifolia*	Coast live oak	35	30	Fair	Poor	5	24.80	13	12	14	9	5	-	Mesa Verde onsite	Preserved/avoided	Heritage	
184	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	3	18.92	9	9	14	-	-	-	Mesa Verde onsite	Removal	Heritage	
190	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	7	41.19	10	16	18	12	18	15	Mesa Verde onsite	Removal	Heritage	18
191	*Quercus agrifolia*	Coast live oak	35	40	Good	Fair	4	29.75	2	6	26	13	-	-	Mesa Verde onsite	Removal	Heritage	
204	*Quercus agrifolia*	Coast live oak	30	25	Poor	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
238	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
248	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
283	*Olea europaea*	Olive	20	15	Critical	Critical	6	9.75	4	4	5	2	3	5	Mesa Verde onsite	Removal	Non-jurisdictional	
322	*Quercus agrifolia*	Coast live oak	5	10	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
324	*Quercus agrifolia*	Coast live oak	25	30	Poor	Poor	5	32.53	18	14	15	12	13	-	Mesa Verde onsite	Removal	Heritage	
337	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
338	*Quercus agrifolia*	Coast live oak	10	15	Poor	Poor	3	11.00	7	6	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
339	*Quercus agrifolia*	Coast live oak	15	20	Poor	Poor	3	13.75	10	8	5	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
341	*Quercus agrifolia*	Coast live oak	25	30	Good	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
342	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	7	51.82	10	28	3	24	24	24	Mesa Verde onsite	Preserved/avoided	Heritage	8
343	*Quercus agrifolia*	Coast live oak	40	35	Good	Fair	2	26.17	18	19	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
344	*Quercus agrifolia*	Coast live oak	30	40	Good	Fair	3	36.81	29	17	15	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
345	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Fallen
346	*Quercus agrifolia*	Coast live oak	15	17	Fair	Poor	2	12.08	11	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
347	*Quercus agrifolia*	Coast live oak	18	15	Fair	Fair	2	16.97	12	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
348	*Quercus agrifolia*	Coast live oak	7	8	Critical	Poor	2	17.03	13	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
349	*Quercus agrifolia*	Coast live oak	20	30	Fair	Fair	2	17.69	13	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
350	*Quercus agrifolia*	Coast live oak	10	17	Fair	Fair	5	21.61	12	7	12	11	3	-	Mesa Verde onsite	Preserved/avoided	Heritage	
351	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Fallen
352	*Quercus agrifolia*	Coast live oak	22	20	Fair	Fair	4	18.00	8	10	12	4	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
353	*Quercus agrifolia*	Coast live oak	15	15	Poor	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
354	*Quercus agrifolia*	Coast live oak	14	18	Fair	Poor	5	20.98	11	7	7	11	10	-	Mesa Verde onsite	Preserved/avoided	Heritage	
355	*Quercus agrifolia*	Coast live oak	22	18	Fair	Fair	2	18.38	13	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
356	*Quercus agrifolia*	Coast live oak	20	28	Poor	Poor	5	27.24	10	11	15	10	14	-	Mesa Verde onsite	Preserved/avoided	Heritage	
357	*Quercus agrifolia*	Coast live oak	20	15	Poor	Fair	2	12.81	10	8	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
358	*Quercus agrifolia*	Coast live oak	22	19	Fair	Good	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
359	*Quercus agrifolia*	Coast live oak	22	25	Fair	Fair	2	21.40	17	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
360	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
361	*Quercus agrifolia*	Coast live oak	12	17	Poor	Fair	4	15.39	8	4	11	6	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
362	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Stump
363	*Quercus agrifolia*	Coast live oak	15	15	Fair	Poor	6	14.83	7	3	10	7	2	3	Mesa Verde onsite	Preserved/avoided	Heritage	
364	*Quercus agrifolia*	Coast live oak	10	8	Poor	Fair	4	5.00	2	1	2	4	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
365	*Quercus agrifolia*	Coast live oak	17	15	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
366	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Fallen
367	*Quercus agrifolia*	Coast live oak	17	18	Poor	Poor	4	23.37	13	12	8	13	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
368	*Quercus agrifolia*	Coast live oak	23	15	Poor	Poor	3	19.03	12	7	13	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
369	*Quercus agrifolia*	Coast live oak	16	13	Poor	Poor	2	15.56	11	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
370	*Quercus agrifolia*	Coast live oak	8	8	Fair	Poor	2	9.43	8	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
371	*Quercus agrifolia*	Coast live oak	15	20	Poor	Poor	3	19.70	10	12	12	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
372	*Quercus agrifolia*	Coast live oak	10	12	Fair	Fair	2	20.81	17	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
373	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	5	25.98	13	9	10	15	10	-	Mesa Verde onsite	Preserved/avoided	Heritage	
375	*Quercus agrifolia*	Coast live oak	25	18	Fair	Poor	3	20.71	13	14	8	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
376	*Quercus agrifolia*	Coast live oak	8	10	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
377	*Quercus agrifolia*	Coast live oak	17	15	Fair	Fair	2	10.20	10	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
378	*Quercus agrifolia*	Coast live oak	5	1	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Broken in half
379	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	2	16.40	13	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
380	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	2	15.00	12	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
381	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
383	*Quercus agrifolia*	Coast live oak	22	20	Fair	Fair	3	20.98	14	12	10	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
384	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
385	*Quercus agrifolia*	Coast live oak	25	30	Good	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
386	*Quercus agrifolia*	Coast live oak	25	15	Critical	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
387	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Fair	4	9.06	5	5	4	4	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
388	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
390	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
391	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	3	18.60	11	9	12	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
392	*Quercus agrifolia*	Coast live oak	25	30	Critical	Critical	6	21.79	11	4	7	12	8	9	Mesa Verde onsite	Encroachment	Heritage	
393	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
394	*Quercus agrifolia*	Coast live oak	15	15	Fair	Poor	2	13.34	13	3	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
395	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
396	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	2	24.74	6	24	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
397	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
398	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
399	*Quercus agrifolia*	Coast live oak	5	2	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
401	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	3	16.34	7	7	13	-	-	-	Mesa Verde onsite	Removal	Heritage	
403	*Quercus agrifolia*	Coast live oak	20	20	Critical	Critical	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
404	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	2	11.18	10	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
405	*Quercus agrifolia*	Coast live oak	5	10	Critical	Critical	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
406	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
407	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
408	*Quercus agrifolia*	Coast live oak	8	10	Poor	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
409	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
410	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
411	*Quercus agrifolia*	Coast live oak	30	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
412	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	2	14.87	10	11	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
413	*Quercus agrifolia*	Coast live oak	10	15	Critical	Critical	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
414	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
415	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
416	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
417	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
418	*Quercus agrifolia*	Coast live oak	25	25	Critical	Poor	1	23.00	23	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
419	*Quercus agrifolia*	Coast live oak	30	15	Critical	Poor	2	9.49	9	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
420	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
421	*Quercus agrifolia*	Coast live oak	25	30	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
422	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
424	*Quercus berberidifolia*	Scrub oak	5	15	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
427	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
430	*Quercus agrifolia*	Coast live oak	35	35	Critical	Poor	4	27.17	18	13	7	14	-	-	Mesa Verde onsite	Encroachment	Heritage	
431	*Quercus agrifolia*	Coast live oak	7	5	Critical	Critical	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	Fire damage
439	*Quercus agrifolia*	Coast live oak	8	8	Fair	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
440	*Quercus agrifolia*	Coast live oak	28	30	Critical	Poor	3	23.85	16	12	13	-	-	-	Mesa Verde onsite	Removal	Heritage	
442	*Quercus agrifolia*	Coast live oak	30	35	Poor	Poor	4	35.14	17	12	21	19	-	-	Mesa Verde onsite	Removal	Heritage	
443	*Quercus agrifolia*	Coast live oak	10	5	Poor	Poor	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
444	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
445	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	29.00	29	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	Fallen
447	*Quercus agrifolia*	Coast live oak	15	27	Poor	Poor	5	22.02	10	13	4	10	10	-	Mesa Verde onsite	Preserved/avoided	Heritage	
448	*Quercus agrifolia*	Coast live oak	18	25	Poor	Fair	3	23.11	13	14	13	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
449	*Quercus agrifolia*	Coast live oak	18	15	Poor	Poor	2	18.44	12	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
451	*Quercus agrifolia*	Coast live oak	15	17	Poor	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
452	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	2	36.06	30	20	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
453	*Quercus agrifolia*	Coast live oak	25	30	Fair	Fair	2	25.00	15	20	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
454	*Quercus agrifolia*	Coast live oak	15	40	Fair	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
455	*Quercus agrifolia*	Coast live oak	18	45	Fair	Fair	3	52.06	39	17	30	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
456	*Quercus agrifolia*	Coast live oak	28	50	Fair	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Old tag 466
457	*Quercus agrifolia*	Coast live oak	40	45	Fair	Fair	1	27.00	27	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Old tag 465
458	*Quercus agrifolia*	Coast live oak	40	40	Good	Fair	4	30.87	7	18	18	16	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
459	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
460	*Quercus agrifolia*	Coast live oak	40	45	Good	Fair	2	38.18	27	27	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
461	*Quercus agrifolia*	Coast live oak	20	20	Fair	Poor	2	13.45	10	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
462	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	2	9.49	9	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
463	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	4	6.71	4	2	3	4	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
464	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	3	11.00	7	6	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
465	*Quercus agrifolia*	Coast live oak	10	20	Dead	Dead	3	13.67	9	9	5	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
466	*Quercus agrifolia*	Coast live oak	30	10	Critical	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
467	*Quercus agrifolia*	Coast live oak	30	30	Fair	Poor	5	20.88	5	5	7	9	16	-	Mesa Verde onsite	Preserved/avoided	Heritage	
468	*Quercus agrifolia*	Coast live oak	35	20	Critical	Critical	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
469	*Quercus agrifolia*	Coast live oak	30	30	Critical	Critical	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
471	*Quercus agrifolia*	Coast live oak	15	10	Critical	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
472	*Quercus agrifolia*	Coast live oak	30	45	Critical	Critical	8	32.82	6	11	13	13	13	10	Mesa Verde onsite	Preserved/avoided	Heritage	13,12
473	*Quercus agrifolia*	Coast live oak	25	30	Poor	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
474	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	2	22.63	16	16	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
476	*Quercus agrifolia*	Coast live oak	30	26	Good	Good	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
477	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
478	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
479	*Quercus agrifolia*	Coast live oak	40	40	Fair	Fair	5	27.31	13	14	14	8	11	-	Mesa Verde onsite	Preserved/avoided	Heritage	
480	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
481	*Quercus agrifolia*	Coast live oak	5	25	Poor	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
482	*Quercus agrifolia*	Coast live oak	30	30	Fair	Poor	3	20.78	20	4	4	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
483	*Quercus agrifolia*	Coast live oak	40	30	Fair	Good	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
484	*Quercus agrifolia*	Coast live oak	35	50	Fair	Fair	6	29.51	13	13	8	12	10	15	Mesa Verde onsite	Preserved/avoided	Heritage	
485	*Quercus agrifolia*	Coast live oak	35	40	Critical	Poor	5	21.91	7	10	9	9	13	-	Mesa Verde onsite	Preserved/avoided	Heritage	
486	*Quercus agrifolia*	Coast live oak	20	20	Fair	Poor	2	7.62	7	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
487	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
488	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Fallen
489	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
490	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	3	11.58	7	7	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
491	*Quercus agrifolia*	Coast live oak	35	30	Poor	Poor	4	18.38	11	9	6	10	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
492	*Quercus agrifolia*	Coast live oak	10	5	Critical	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
493	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
495	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	2	16.97	12	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
496	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Fallen
497	*Quercus agrifolia*	Coast live oak	35	25	Poor	Poor	4	19.16	6	13	9	9	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
498	*Quercus agrifolia*	Coast live oak	30	30	Dead	Dead	1	23.00	23	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
499	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	5	23.04	9	13	9	10	10	-	Mesa Verde onsite	Preserved/avoided	Heritage	
500	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	3	23.11	13	13	14	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
501	*Quercus agrifolia*	Coast live oak	35	35	Good	Fair	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
502	*Quercus agrifolia*	Coast live oak	20	25	Critical	Critical	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
503	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	2	13.45	9	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
504	*Quercus agrifolia*	Coast live oak	35	35	Fair	Poor	3	36.46	22	13	26	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
505	*Quercus agrifolia*	Coast live oak	35	40	Critical	Critical	4	36.63	12	26	9	21	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
507	*Quercus agrifolia*	Coast live oak	30	20	Critical	Critical	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
508	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	2	14.87	5	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
509	*Quercus agrifolia*	Coast live oak	15	20	Critical	Critical	7	15.10	8	8	9	4	1	1	Mesa Verde onsite	Preserved/avoided	Heritage	1
510	*Quercus agrifolia*	Coast live oak	35	30	Good	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
511	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
512	*Quercus agrifolia*	Coast live oak	35	45	Good	Fair	2	28.18	13	25	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
513	*Quercus agrifolia*	Coast live oak	35	45	Fair	Fair	2	29.73	28	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
514	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	6	34.28	9	13	20	10	16	13	Mesa Verde onsite	Preserved/avoided	Heritage	
516	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	2	7.21	6	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
517	*Quercus agrifolia*	Coast live oak	35	50	Fair	Fair	2	24.19	12	21	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
518	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
519	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
520	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
521	*Quercus agrifolia*	Coast live oak	15	15	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
522	*Quercus agrifolia*	Coast live oak	25	30	Dead	Dead	4	30.05	22	13	9	13	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
524	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	2	12.08	11	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
525	*Quercus agrifolia*	Coast live oak	35	40	Fair	Poor	4	33.27	15	24	15	9	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
526	*Quercus agrifolia*	Coast live oak	25	10	Poor	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
527	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	3	12.37	9	6	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
528	*Quercus agrifolia*	Coast live oak	10	2	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
529	*Quercus agrifolia*	Coast live oak	30	15	Poor	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
530	*Quercus agrifolia*	Coast live oak	30	20	Fair	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
531	*Quercus agrifolia*	Coast live oak	35	15	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
532	*Quercus agrifolia*	Coast live oak	15	20	Poor	Critical	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Fallen
533	*Quercus agrifolia*	Coast live oak	15	20	Fair	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
534	*Quercus agrifolia*	Coast live oak	35	35	Fair	Poor	2	19.80	14	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
535	*Quercus agrifolia*	Coast live oak	35	30	Fair	Poor	5	22.58	8	10	11	12	9	-	Mesa Verde onsite	Preserved/avoided	Heritage	
536	*Quercus agrifolia*	Coast live oak	35	35	Fair	Poor	3	17.23	13	8	8	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
537	*Quercus agrifolia*	Coast live oak	35	30	Fair	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
538	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
539	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
540	*Quercus agrifolia*	Coast live oak	35	30	Critical	Poor	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
542	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	2	15.00	12	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
543	*Quercus agrifolia*	Coast live oak	35	30	Poor	Poor	2	26.42	13	23	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
544	*Quercus agrifolia*	Coast live oak	30	10	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
545	*Quercus agrifolia*	Coast live oak	35	20	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
546	*Quercus agrifolia*	Coast live oak	35	40	Fair	Poor	5	27.09	16	8	7	13	14	-	Mesa Verde onsite	Preserved/avoided	Heritage	
547	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
548	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
549	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	3	19.62	5	6	18	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
550	*Quercus agrifolia*	Coast live oak	30	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
551	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	25.00	25	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
559	*Quercus agrifolia*	Coast live oak	40	50	Good	Good	1	35.00	35	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
560	*Quercus agrifolia*	Coast live oak	25	20	Critical	Critical	3	13.15	11	4	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
561	*Quercus agrifolia*	Coast live oak	30	35	Critical	Critical	6	32.65	16	12	14	15	14	7	Mesa Verde onsite	Preserved/avoided	Heritage	
582	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
583	*Quercus agrifolia*	Coast live oak	35	25	Dead	Dead	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
584	*Quercus agrifolia*	Coast live oak	35	35	Poor	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
585	*Quercus agrifolia*	Coast live oak	25	25	Poor	Poor	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
586	*Quercus agrifolia*	Coast live oak	35	35	Fair	Poor	5	40.56	9	20	14	22	22	-	Mesa Verde onsite	Removal	Heritage	
587	*Quercus agrifolia*	Coast live oak	30	35	Poor	Poor	3	18.60	12	11	9	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
588	*Quercus agrifolia*	Coast live oak	20	35	Dead	Dead	3	22.23	10	13	15	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
589	*Quercus agrifolia*	Coast live oak	30	40	Critical	Critical	3	25.00	9	12	20	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
590	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
591	*Quercus agrifolia*	Coast live oak	35	30	Critical	Critical	2	24.41	20	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
592	*Quercus agrifolia*	Coast live oak	30	35	Critical	Critical	3	17.32	14	10	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
593	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
594	*Quercus agrifolia*	Coast live oak	15	15	Critical	Poor	2	12.73	9	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
595	*Quercus agrifolia*	Coast live oak	30	30	Critical	Fair	2	22.85	21	9	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
596	*Quercus agrifolia*	Coast live oak	30	30	Critical	Critical	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
597	*Quercus agrifolia*	Coast live oak	12	30	Critical	Critical	1	26.00	26	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
598	*Quercus agrifolia*	Coast live oak	18	25	Critical	Critical	6	33.88	9	14	13	15	21	6	Mesa Verde onsite	Removal	Heritage	
599	*Quercus agrifolia*	Coast live oak	40	40	Poor	Poor	4	22.65	12	12	12	9	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
600	*Quercus agrifolia*	Coast live oak	45	50	Fair	Fair	1	29.00	29	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	No tag
601	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	No tag
602	*Quercus agrifolia*	Coast live oak	40	55	Good	Fair	1	34.00	34	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	No tag
603	*Quercus agrifolia*	Coast live oak	40	50	Fair	Fair	2	24.41	20	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
604	*Quercus agrifolia*	Coast live oak	40	45	Fair	Fair	5	31.84	22	7	9	16	12	-	Mesa Verde onsite	Preserved/avoided	Heritage	
606	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	No tag
607	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	No tag
608	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	2	16.28	12	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
615	*Quercus agrifolia*	Coast live oak	25	25	Critical	Critical	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
620	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
622	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
627	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
628	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	2	18.60	15	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
629	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	2	8.60	7	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
631	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	2	15.23	14	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
632	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	0.00	0	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
634	*Quercus agrifolia*	Coast live oak	10	5	Poor	Poor	3	5.39	3	4	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
635	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
636	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	2	17.80	14	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
638	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	2	20.52	15	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
640	*Quercus agrifolia*	Coast live oak	40	30	Poor	Fair	3	34.34	23	25	5	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
641	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
642	*Quercus agrifolia*	Coast live oak	40	30	Dead	Dead	3	23.73	13	15	13	-	-	-	Mesa Verde onsite	Removal	Heritage	
643	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
645	*Quercus agrifolia*	Coast live oak	15	5	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
647	*Quercus agrifolia*	Coast live oak	15	8	Critical	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
648	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
649	*Quercus agrifolia*	Coast live oak	35	20	Fair	Poor	2	17.03	13	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
650	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
651	*Quercus agrifolia*	Coast live oak	30	15	Poor	Fair	2	16.40	13	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
652	*Quercus agrifolia*	Coast live oak	30	25	Critical	Poor	4	17.26	9	10	9	6	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
653	*Quercus agrifolia*	Coast live oak	35	20	Critical	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
654	*Quercus agrifolia*	Coast live oak	15	8	Poor	Poor	3	7.81	3	6	4	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
655	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Second trunk cut down
656	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
657	*Quercus agrifolia*	Coast live oak	8	5	Dead	Dead	1	38.00	38	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Standing totem
658	*Quercus agrifolia*	Coast live oak	35	20	Poor	Poor	3	25.16	16	16	11	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
659	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	15.81	15	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
660	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
661	*Quercus agrifolia*	Coast live oak	10	5	Fair	Poor	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1,1
662	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	4	13.34	9	6	6	5	-	-	Mesa Verde onsite	Removal	Heritage	
663	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	2	21.21	15	15	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
665	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	3	38.33	27	8	26	-	-	-	Mesa Verde onsite	Removal	Heritage	
666	*Quercus agrifolia*	Coast live oak	20	10	Poor	Poor	5	13.93	9	6	6	5	4	-	Mesa Verde onsite	Removal	Heritage	
671	*Quercus agrifolia*	Coast live oak	25	15	Critical	Poor	5	8.19	5	4	4	3	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
672	*Quercus agrifolia*	Coast live oak	20	10	Poor	Critical	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
673	*Quercus agrifolia*	Coast live oak	6	4	Poor	Poor	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1,1
674	*Quercus agrifolia*	Coast live oak	10	5	Fair	Poor	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1,1
676	*Quercus agrifolia*	Coast live oak	20	10	Poor	Poor	2	23.77	22	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
677	*Quercus agrifolia*	Coast live oak	15	7	Critical	Poor	1	26.00	26	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
678	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
679	*Quercus agrifolia*	Coast live oak	40	30	Poor	Poor	2	29.02	29	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
682	*Quercus agrifolia*	Coast live oak	8	5	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
683	*Quercus agrifolia*	Coast live oak	20	10	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
686	*Quercus agrifolia*	Coast live oak	20	10	Poor	Poor	3	20.02	1	12	16	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
688	*Quercus agrifolia*	Coast live oak	35	35	Dead	Dead	2	33.94	24	24	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
689	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	2	22.36	22	4	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
693	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
694	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	2	21.47	19	10	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
696	*Quercus agrifolia*	Coast live oak	8	2	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
697	*Quercus agrifolia*	Coast live oak	35	20	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
698	*Quercus agrifolia*	Coast live oak	40	30	Dead	Dead	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
699	*Quercus agrifolia*	Coast live oak	45	35	Fair	Poor	5	41.75	24	22	17	13	15	-	Mesa Verde onsite	Removal	Heritage	
700	*Quercus agrifolia*	Coast live oak	25	20	Critical	Critical	4	21.40	12	13	9	8	-	-	Mesa Verde onsite	Removal	Heritage	
701	*Quercus agrifolia*	Coast live oak	40	35	Fair	Fair	1	32.00	32	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
707	*Quercus agrifolia*	Coast live oak	40	25	Poor	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
708	*Quercus agrifolia*	Coast live oak	45	25	Fair	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
710	*Quercus agrifolia*	Coast live oak	15	8	Critical	Critical	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
712	*Quercus agrifolia*	Coast live oak	40	30	Critical	Critical	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
713	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
714	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
715	*Quercus agrifolia*	Coast live oak	25	10	Critical	Poor	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	No tag. Bees
716	*Quercus agrifolia*	Coast live oak	35	20	Critical	Poor	2	21.21	15	15	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
717	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	3	26.91	18	16	12	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
719	*Quercus agrifolia*	Coast live oak	20	10	Critical	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
720	*Quercus agrifolia*	Coast live oak	10	2	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
722	*Quercus agrifolia*	Coast live oak	20	5	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
724	*Quercus agrifolia*	Coast live oak	8	8	Critical	Poor	2	5.10	5	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
725	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	2	33.29	28	18	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
726	*Quercus agrifolia*	Coast live oak	15	20	Fair	Critical	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
727	*Quercus agrifolia*	Coast live oak	20	12	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
728	*Quercus agrifolia*	Coast live oak	15	2	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
729	*Quercus agrifolia*	Coast live oak	40	20	Critical	Poor	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
730	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	3	31.83	2	15	28	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
731	*Quercus agrifolia*	Coast live oak	40	35	Poor	Poor	4	44.74	32	19	19	16	-	-	Mesa Verde onsite	Encroachment	Heritage	
733	*Quercus agrifolia*	Coast live oak	15	20	Fair	Fair	2	15.00	9	12	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
734	*Quercus agrifolia*	Coast live oak	5	5	Poor	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	Resprout fallen
736	*Quercus agrifolia*	Coast live oak	25	25	Critical	Critical	1	42.00	42	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
737	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	2	12.81	10	8	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
739	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	2	26.25	20	17	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
740	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	3	30.15	22	16	13	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
744	*Quercus agrifolia*	Coast live oak	35	40	Poor	Poor	6	37.19	25	15	15	12	10	8	Mesa Verde onsite	Encroachment	Heritage	
745	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	2	15.26	13	8	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
746	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
750	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	3	15.59	13	7	5	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
751	*Quercus agrifolia*	Coast live oak	40	40	Poor	Fair	1	34.00	34	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
752	*Quercus agrifolia*	Coast live oak	35	35	Poor	Fair	3	38.50	28	23	13	-	-	-	Mesa Verde onsite	Removal	Heritage	
755	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	2	28.30	24	15	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
757	*Quercus agrifolia*	Coast live oak	40	40	Poor	Poor	3	38.38	28	20	17	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
761	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	1	32.00	32	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
762	*Quercus agrifolia*	Coast live oak	30	25	Poor	Poor	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
763	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
764	*Quercus agrifolia*	Coast live oak	30	25	Critical	Poor	2	32.76	28	17	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
765	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
766	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	2	17.80	11	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
767	*Quercus agrifolia*	Coast live oak	15	10	Poor	Poor	2	14.21	11	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
768	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	2	24.08	18	16	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
769	*Quercus agrifolia*	Coast live oak	30	10	Critical	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
770	*Quercus agrifolia*	Coast live oak	10	5	Critical	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
771	*Quercus agrifolia*	Coast live oak	25	10	Poor	Poor	2	7.28	7	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
772	*Quercus agrifolia*	Coast live oak	8	4	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
773	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
774	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
775	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	3	14.35	11	7	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
776	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
778	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
779	*Quercus agrifolia*	Coast live oak	45	35	Critical	Fair	2	39.05	30	25	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
780	*Quercus agrifolia*	Coast live oak	25	10	Poor	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
781	*Quercus agrifolia*	Coast live oak	25	10	Fair	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
782	*Quercus agrifolia*	Coast live oak	40	20	Poor	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
783	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	4	13.23	13	2	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
784	*Quercus agrifolia*	Coast live oak	15	10	Poor	Poor	4	11.62	9	5	5	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
785	*Quercus agrifolia*	Coast live oak	5	5	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
788	*Quercus agrifolia*	Coast live oak	20	10	Poor	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
789	*Quercus agrifolia*	Coast live oak	5	5	Critical	Poor	3	4.24	4	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
790	*Quercus agrifolia*	Coast live oak	5	5	Poor	Poor	3	5.20	5	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
791	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	3	5.39	4	3	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
795	*Quercus agrifolia*	Coast live oak	15	10	Critical	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
796	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	3	4.58	4	2	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
797	*Quercus agrifolia*	Coast live oak	20	10	Poor	Poor	3	11.58	10	5	3	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
798	*Quercus agrifolia*	Coast live oak	8	5	Poor	Poor	2	7.21	6	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
799	*Quercus agrifolia*	Coast live oak	35	25	Dead	Dead	2	16.55	15	7	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
800	*Quercus agrifolia*	Coast live oak	20	10	Critical	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
801	*Quercus agrifolia*	Coast live oak	25	20	Critical	Poor	5	12.29	12	2	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Heritage	
802	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	5.83	5	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
803	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1,1
804	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
805	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
806	*Quercus agrifolia*	Coast live oak	15	2	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
810	*Quercus agrifolia*	Coast live oak	35	20	Poor	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
811	*Quercus agrifolia*	Coast live oak	25	30	Critical	Critical	5	14.66	8	7	7	2	7	-	Mesa Verde onsite	Encroachment	Heritage	
812	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	2	14.14	10	10	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
813	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
815	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	2	12.65	12	4	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
816	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	3	12.96	8	10	2	-	-	-	Mesa Verde onsite	Removal	Heritage	
817	*Quercus agrifolia*	Coast live oak	35	20	Dead	Dead	2	18.03	1	18	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
818	*Quercus agrifolia*	Coast live oak	35	20	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
819	*Quercus agrifolia*	Coast live oak	30	15	Critical	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
820	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
821	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
822	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
824	*Quercus agrifolia*	Coast live oak	40	25	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
825	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
826	*Quercus agrifolia*	Coast live oak	25	30	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
827	*Quercus agrifolia*	Coast live oak	40	30	Critical	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
828	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	2	19.21	15	12	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
830	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
831	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	2	17.46	16	7	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
833	*Quercus agrifolia*	Coast live oak	25	35	Dead	Dead	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
834	*Quercus agrifolia*	Coast live oak	35	20	Critical	Poor	2	22.02	17	14	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
835	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
836	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
837	*Quercus agrifolia*	Coast live oak	10	10	Critical	Fair	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
838	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	3	19.10	12	11	10	-	-	-	Mesa Verde onsite	Removal	Heritage	
839	*Quercus agrifolia*	Coast live oak	35	30	Dead	Dead	3	26.10	17	14	14	-	-	-	Mesa Verde onsite	Removal	Heritage	
840	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
841	*Quercus agrifolia*	Coast live oak	35	30	Dead	Dead	2	18.44	14	12	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
843	*Quercus agrifolia*	Coast live oak	40	25	Dead	Dead	2	26.40	24	11	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
844	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
845	*Quercus agrifolia*	Coast live oak	10	5	Poor	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
846	*Quercus agrifolia*	Coast live oak	40	25	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
847	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	12.81	10	8	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
848	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
850	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	2	17.80	14	11	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
851	*Quercus agrifolia*	Coast live oak	35	25	Poor	Poor	2	14.21	11	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
852	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
853	*Quercus agrifolia*	Coast live oak	25	15	Critical	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
854	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
855	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	2	17.69	12	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
856	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
857	*Quercus agrifolia*	Coast live oak	35	25	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
858	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
859	*Quercus agrifolia*	Coast live oak	40	30	Poor	Fair	4	24.52	13	12	12	12	-	-	Mesa Verde onsite	Removal	Heritage	
860	*Quercus agrifolia*	Coast live oak	35	30	Dead	Dead	3	22.65	15	12	12	-	-	-	Mesa Verde onsite	Removal	Heritage	
861	*Quercus agrifolia*	Coast live oak	10	10	Critical	Poor	3	4.58	4	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
862	*Quercus agrifolia*	Coast live oak	35	30	Dead	Dead	3	20.78	12	12	12	-	-	-	Mesa Verde onsite	Removal	Heritage	
864	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
868	*Quercus agrifolia*	Coast live oak	20	10	Poor	Fair	2	7.07	5	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
871	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
872	*Quercus agrifolia*	Coast live oak	30	25	Poor	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
873	*Quercus agrifolia*	Coast live oak	40	30	Dead	Dead	3	27.86	18	16	14	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
874	*Quercus agrifolia*	Coast live oak	45	35	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
875	*Quercus agrifolia*	Coast live oak	10	5	Critical	Poor	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
876	*Quercus agrifolia*	Coast live oak	35	25	Poor	Poor	2	17.80	11	14	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
877	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1
878	*Quercus agrifolia*	Coast live oak	35	25	Poor	Fair	3	22.00	14	12	12	-	-	-	Mesa Verde onsite	Removal	Heritage	
880	*Quercus agrifolia*	Coast live oak	35	30	Poor	Poor	3	23.15	14	12	14	-	-	-	Mesa Verde onsite	Encroachment	Heritage	Poor
881	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	3	8.31	7	4	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
882	*Quercus agrifolia*	Coast live oak	20	10	Poor	Fair	2	7.07	5	5	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
884	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Encroachment	Protected	
885	*Quercus agrifolia*	Coast live oak	40	20	Poor	Poor	6	30.27	14	12	12	12	12	12	Mesa Verde onsite	Removal	Heritage	
886	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	2	5.00	4	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
887	*Quercus agrifolia*	Coast live oak	30	25	Poor	Fair	2	18.44	14	12	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
888	*Quercus agrifolia*	Coast live oak	40	40	Fair	Fair	6	37.22	20	16	16	14	14	9	Mesa Verde onsite	Removal	Heritage	
889	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
891	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
892	*Quercus agrifolia*	Coast live oak	35	30	Poor	Poor	2	22.67	17	15	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
893	*Quercus agrifolia*	Coast live oak	10	20	Critical	Critical	3	17.23	16	5	4	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
894	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
896	*Quercus agrifolia*	Coast live oak	10	2	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
897	*Quercus agrifolia*	Coast live oak	35	25	Poor	Fair	2	22.80	18	14	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
898	*Quercus agrifolia*	Coast live oak	35	25	Fair	Poor	3	21.68	15	7	14	-	-	-	Mesa Verde onsite	Removal	Heritage	
900	*Quercus agrifolia*	Coast live oak	14	30	Fair	Fair	5	39.05	25	15	15	15	15	-	Mesa Verde onsite	Encroachment	Heritage	
901	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
902	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	3	30.20	20	16	16	-	-	-	Mesa Verde onsite	Removal	Heritage	
903	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Dead
904	*Quercus agrifolia*	Coast live oak	8	3	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
907	*Quercus agrifolia*	Coast live oak	15	15	Critical	Critical	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
908	*Quercus agrifolia*	Coast live oak	25	30	Critical	Critical	2	20.12	18	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
909	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	2	15.62	12	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
910	*Quercus agrifolia*	Coast live oak	20	25	Poor	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
915	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	2	15.81	13	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
917	*Quercus agrifolia*	Coast live oak	45	40	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
918	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	2	29.73	20	22	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
919	*Quercus agrifolia*	Coast live oak	15	15	Critical	Critical	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
920	*Quercus agrifolia*	Coast live oak	45	40	Fair	Fair	2	29.53	14	26	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
921	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	2	26.93	7	26	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
922	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
923	*Quercus agrifolia*	Coast live oak	35	20	Poor	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
924	*Quercus agrifolia*	Coast live oak	30	15	Critical	Critical	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
925	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
926	*Quercus agrifolia*	Coast live oak	40	25	Poor	Fair	2	23.35	16	17	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
928	*Quercus agrifolia*	Coast live oak	30	15	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
929	*Quercus agrifolia*	Coast live oak	35	20	Critical	Critical	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
930	*Quercus agrifolia*	Coast live oak	35	25	Poor	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
931	*Quercus agrifolia*	Coast live oak	40	40	Poor	Poor	1	36.00	36	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
933	*Quercus agrifolia*	Coast live oak	30	30	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
934	*Quercus agrifolia*	Coast live oak	40	40	Critical	Poor	1	40.00	40	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
935	*Quercus agrifolia*	Coast live oak	30	40	Critical	Poor	7	47.69	20	22	20	14	25	12	Mesa Verde onsite	Removal	Heritage	5
936	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
937	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
941	*Quercus berberidifolia*	Scrub oak	20	20	Critical	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
942	*Quercus berberidifolia*	Scrub oak	0	0	Dead	Dead	4	7.35	5	4	3	2	-	-	Mesa Verde onsite	Removal	Protected	
943	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	5.83	4	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
945	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	10	12.65	4	4	4	4	4	4	Mesa Verde onsite	Removal	Heritage	4,4,4,4
948	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	7	10.00	5	4	4	4	3	3	Mesa Verde onsite	Removal	Protected	3
949	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
950	*Quercus agrifolia*	Coast live oak	15	20	Fair	Fair	13	13.96	5	5	5	5	4	4	Mesa Verde onsite	Removal	Heritage	3,3,3,3,3,3,3
951	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	4	8.00	4	4	4	4	-	-	Mesa Verde onsite	Removal	Protected	
952	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	3	12.21	7	8	6	-	-	-	Mesa Verde onsite	Removal	Heritage	
954	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	4	7.68	5	4	3	3	-	-	Mesa Verde onsite	Removal	Protected	
955	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	3	7.68	5	5	3	-	-	-	Mesa Verde onsite	Removal	Protected	
956	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
957	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	3	7.48	6	4	2	-	-	-	Mesa Verde onsite	Removal	Protected	
961	*Quercus agrifolia*	Coast live oak	35	30	Poor	Fair	1	32.00	32	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
963	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	3	33.82	30	12	10	-	-	-	Mesa Verde onsite	Removal	Heritage	
964	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Poor	3	8.77	6	5	4	-	-	-	Mesa Verde onsite	Removal	Protected	
965	*Quercus agrifolia*	Coast live oak	40	40	Fair	Fair	1	39.00	39	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
966	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	3	11.09	7	7	5	-	-	-	Mesa Verde onsite	Removal	Protected	
967	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Critical	3	11.70	8	8	3	-	-	-	Mesa Verde onsite	Removal	Protected	
968	*Quercus agrifolia*	Coast live oak	25	20	Fair	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	

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Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
969	*Quercus agrifolia*	Coast live oak	20	20	Critical	Critical	5	21.84	9	9	15	9	3	-	Mesa Verde onsite	Removal	Heritage	
970	*Quercus agrifolia*	Coast live oak	20	10	Critical	Poor	2	5.83	5	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
971	*Quercus agrifolia*	Coast live oak	20	10	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
972	*Quercus agrifolia*	Coast live oak	35	30	Critical	Critical	2	28.32	21	19	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
973	*Quercus agrifolia*	Coast live oak	15	30	Dead	Dead	3	39.37	37	10	9	-	-	-	Mesa Verde onsite	Removal	Heritage	
975	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
977	*Quercus agrifolia*	Coast live oak	35	45	Critical	Fair	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
978	*Quercus agrifolia*	Coast live oak	35	35	Poor	Poor	2	34.13	29	18	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
979	*Quercus agrifolia*	Coast live oak	30	20	Critical	Critical	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
980	*Quercus agrifolia*	Coast live oak	30	20	Critical	Critical	2	16.03	16	1	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
983	*Quercus agrifolia*	Coast live oak	30	45	Critical	Critical	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
984	*Quercus agrifolia*	Coast live oak	30	15	Critical	Critical	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
985	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	2	18.44	12	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
986	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	3	14.53	11	9	3	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
987	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	4	6.08	2	1	4	4	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
989	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	10	8.89	4	4	3	3	3	2	Mesa Verde onsite	Removal	Protected	2,2,2,2
993	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	7.81	5	3	3	3	3	-	Mesa Verde onsite	Removal	Protected	
994	*Quercus berberidifolia*	Scrub oak	10	7	Dead	Dead	4	6.56	4	3	3	3	-	-	Mesa Verde onsite	Removal	Protected	
998	*Quercus agrifolia*	Coast live oak	45	40	Fair	Fair	3	47.93	28	28	27	-	-	-	Mesa Verde onsite	Removal	Heritage	
1000	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	4	5.74	3	4	2	2	-	-	Mesa Verde onsite	Removal	Protected	
1001	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	4.69	3	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	
1011	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	6.71	3	3	3	3	3	-	Mesa Verde onsite	Removal	Protected	
1017	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	5.57	3	2	3	3	-	-	Mesa Verde onsite	Removal	Protected	
1018	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	4.69	3	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
1023	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	6	6.78	4	3	3	2	2	2	Mesa Verde onsite	Removal	Protected	
1026	*Quercus agrifolia*	Coast live oak	35	30	Critical	Poor	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1029	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	6.16	3	4	3	2	-	-	Mesa Verde onsite	Removal	Protected	
1030	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	6.86	3	4	3	3	2	-	Mesa Verde onsite	Removal	Protected	
1031	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1032	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	4	21.21	12	12	9	9	-	-	Mesa Verde onsite	Removal	Heritage	
1040	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	15	8.12	2	5	4	2	2	2	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1,1,1,1,1
1041	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Poor	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
1043	*Quercus agrifolia*	Coast live oak	35	25	Critical	Critical	2	20.00	16	12	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1045	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	2	28.02	28	1	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1046	*Quercus agrifolia*	Coast live oak	40	25	Fair	Fair	3	34.71	28	15	14	-	-	-	Mesa Verde onsite	Removal	Heritage	
1047	*Quercus agrifolia*	Coast live oak	25	10	Critical	Critical	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1048	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	27.00	27	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1049	*Quercus agrifolia*	Coast live oak	30	30	Fair	Poor	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1050	*Quercus agrifolia*	Coast live oak	25	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1051	*Quercus agrifolia*	Coast live oak	20	15	Critical	Critical	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1052	*Quercus agrifolia*	Coast live oak	30	30	Dead	Dead	1	27.00	27	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1054	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1058	*Quercus agrifolia*	Coast live oak	25	30	Critical	Poor	2	20.52	14	15	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1059	*Quercus agrifolia*	Coast live oak	12	8	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1061	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1062	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1063	*Quercus agrifolia*	Coast live oak	7	7	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1064	*Quercus agrifolia*	Coast live oak	10	7	Critical	Critical	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1066	*Quercus agrifolia*	Coast live oak	5	5	Critical	Critical	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1067	*Quercus agrifolia*	Coast live oak	35	25	Critical	Poor	2	26.93	25	10	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1068	*Quercus agrifolia*	Coast live oak	12	15	Critical	Critical	2	9.90	7	7	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1072	*Quercus agrifolia*	Coast live oak	8	7	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1073	*Quercus agrifolia*	Coast live oak	10	8	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1075	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1076	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1078	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1080	*Quercus agrifolia*	Coast live oak	30	15	Critical	Critical	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1081	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	2	27.31	25	11	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1082	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1083	*Quercus agrifolia*	Coast live oak	10	8	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1084	*Quercus agrifolia*	Coast live oak	30	30	Dead	Dead	3	27.29	18	15	14	-	-	-	Mesa Verde onsite	Removal	Heritage	
1085	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
1086	*Quercus agrifolia*	Coast live oak	55	40	Fair	Fair	3	49.25	35	25	24	-	-	-	Mesa Verde onsite	Removal	Heritage	
1087	*Quercus agrifolia*	Coast live oak	35	40	Good	Fair	2	41.18	36	20	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1088	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1089	*Quercus agrifolia*	Coast live oak	40	35	Poor	Fair	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1090	*Quercus agrifolia*	Coast live oak	42	30	Critical	Poor	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1091	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1092	*Quercus agrifolia*	Coast live oak	10	15	Fair	Fair	2	7.81	5	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1093	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1094	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1095	*Quercus agrifolia*	Coast live oak	15	15	Critical	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1096	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1097	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1098	*Quercus agrifolia*	Coast live oak	25	25	Fair	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1100	*Quercus agrifolia*	Coast live oak	25	25	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1101	*Quercus agrifolia*	Coast live oak	25	25	Fair	Poor	2	25.46	18	18	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1102	*Quercus agrifolia*	Coast live oak	20	30	Fair	Fair	1	29.00	29	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1103	*Quercus agrifolia*	Coast live oak	15	10	Poor	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1104	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	2	22.63	16	16	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1105	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1106	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1107	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1110	*Quercus agrifolia*	Coast live oak	25	10	Critical	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1111	*Quercus agrifolia*	Coast live oak	10	15	Critical	Poor	3	6.40	4	3	4	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1112	*Quercus agrifolia*	Coast live oak	20	20	Critical	Poor	2	11.31	8	8	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1113	*Quercus agrifolia*	Coast live oak	10	5	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1114	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	2	10.00	8	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1115	*Quercus agrifolia*	Coast live oak	10	15	Fair	Fair	3	15.78	7	10	10	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1116	*Quercus agrifolia*	Coast live oak	25	20	Poor	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1117	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	2	11.66	10	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1118	*Quercus agrifolia*	Coast live oak	20	25	Critical	Poor	4	33.29	16	16	14	20	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1119	*Quercus agrifolia*	Coast live oak	20	10	Poor	Critical	2	10.63	7	8	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1120	*Quercus agrifolia*	Coast live oak	10	10	Fair	Poor	2	7.07	5	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1122	*Quercus agrifolia*	Coast live oak	20	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1124	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1126	*Quercus agrifolia*	Coast live oak	25	30	Fair	Fair	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1127	*Quercus agrifolia*	Coast live oak	35	45	Dead	Dead	1	76.00	76	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1128	*Quercus agrifolia*	Coast live oak	30	30	Good	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1129	*Quercus agrifolia*	Coast live oak	25	25	Critical	Critical	1	23.00	23	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1130	*Quercus agrifolia*	Coast live oak	25	20	Critical	Poor	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1131	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	4	31.62	20	20	10	10	-	-	Mesa Verde onsite	Removal	Heritage	
1132	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	3	30.07	18	18	16	-	-	-	Mesa Verde onsite	Removal	Heritage	
1133	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	2	9.90	7	7	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1134	*Quercus agrifolia*	Coast live oak	25	25	Poor	Fair	2	14.21	9	11	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1135	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1136	*Quercus agrifolia*	Coast live oak	20	25	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1137	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1138	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	2	8.54	8	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1140	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1143	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1144	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1146	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1147	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	3	4.24	4	1	1	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1154	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1155	*Quercus agrifolia*	Coast live oak	25	10	Critical	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1156	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1167	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	5.00	4	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1170	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	6	6.71	3	1	1	4	3	3	Mesa Verde onsite	Removal	Protected	
1171	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1172	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1173	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	10	5.00	4	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
1181	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	5	4.36	2	1	1	3	2	-	Mesa Verde onsite	Removal	Protected	
1193	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Critical	3	7.68	3	5	5	-	-	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
1209	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	2	10.82	6	9	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1210	*Quercus berberidifolia*	Scrub oak	20	15	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1212	*Quercus agrifolia*	Coast live oak	25	20	Fair	Poor	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1217	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1230	*Quercus berberidifolia*	Scrub oak	10	25	Fair	Poor	3	13.86	8	8	8	-	-	-	Mesa Verde onsite	Removal	Heritage	
1253	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1257	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1259	*Quercus agrifolia*	Coast live oak	20	15	Critical	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1260	*Quercus agrifolia*	Coast live oak	5	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
1262	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Fallen
1263	*Quercus agrifolia*	Coast live oak	20	18	Poor	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1265	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	4	17.09	9	7	9	9	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1266	*Quercus agrifolia*	Coast live oak	30	25	Poor	Fair	2	12.65	4	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1267	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	4	24.43	14	13	14	6	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1268	*Quercus agrifolia*	Coast live oak	25	35	Critical	Critical	3	17.75	13	11	5	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1269	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	3	15.00	10	5	10	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1271	*Quercus agrifolia*	Coast live oak	30	40	Fair	Fair	6	24.08	13	13	5	3	12	8	Mesa Verde onsite	Preserved/avoided	Heritage	
1276	*Quercus agrifolia*	Coast live oak	35	40	Good	Fair	2	30.81	18	25	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1277	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1278	*Quercus agrifolia*	Coast live oak	30	40	Good	Fair	2	20.81	17	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1279	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	2	16.40	13	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1280	*Quercus agrifolia*	Coast live oak	40	45	Poor	Fair	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1281	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	2	16.40	10	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1282	*Quercus agrifolia*	Coast live oak	40	45	Critical	Poor	3	27.75	17	20	9	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1283	*Quercus agrifolia*	Coast live oak	30	45	Fair	Fair	3	23.96	9	18	13	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1284	*Quercus agrifolia*	Coast live oak	30	35	Poor	Poor	2	16.40	10	13	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1285	*Quercus agrifolia*	Coast live oak	30	45	Fair	Fair	1	64.00	64	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1286	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1287	*Quercus agrifolia*	Coast live oak	30	15	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1288	*Quercus agrifolia*	Coast live oak	25	40	Dead	Dead	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1289	*Quercus agrifolia*	Coast live oak	30	40	Fair	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1290	*Quercus agrifolia*	Coast live oak	25	30	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1291	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	2	20.25	7	19	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1292	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1293	*Quercus agrifolia*	Coast live oak	35	30	Critical	Poor	1	36.00	36	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1294	*Quercus agrifolia*	Coast live oak	25	25	Poor	Poor	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1295	*Quercus agrifolia*	Coast live oak	10	35	Critical	Critical	3	22.16	17	9	11	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1296	*Quercus agrifolia*	Coast live oak	25	25	Critical	Critical	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1297	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1298	*Quercus berberidifolia*	Scrub oak	15	15	Dead	Dead	3	7.68	3	5	5	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1299	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	2	13.45	10	9	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1304	*Quercus agrifolia*	Coast live oak	35	40	Fair	Fair	1	34.00	34	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1305	*Quercus agrifolia*	Coast live oak	20	20	Critical	Critical	2	13.04	11	7	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1306	*Quercus agrifolia*	Coast live oak	25	20	Critical	Critical	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1307	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1308	*Quercus agrifolia*	Coast live oak	30	35	Poor	Fair	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1309	*Quercus agrifolia*	Coast live oak	25	25	Poor	Fair	3	13.45	9	8	6	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1310	*Quercus agrifolia*	Coast live oak	30	20	Fair	Good	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1311	*Quercus agrifolia*	Coast live oak	30	30	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1312	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	2	17.49	15	9	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1314	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	3	16.16	9	12	6	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1315	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	3	13.08	9	9	3	-	-	-	Mesa Verde onsite	Removal	Heritage	
1316	*Quercus agrifolia*	Coast live oak	30	15	Critical	Critical	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1317	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1318	*Quercus agrifolia*	Coast live oak	30	25	Poor	Fair	2	18.03	10	15	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1319	*Quercus agrifolia*	Coast live oak	30	10	Poor	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1320	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1321	*Quercus agrifolia*	Coast live oak	30	15	Poor	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1323	*Quercus agrifolia*	Coast live oak	30	10	Poor	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1324	*Quercus agrifolia*	Coast live oak	25	20	Poor	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1325	*Quercus agrifolia*	Coast live oak	30	35	Dead	Dead	1	42.00	42	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1326	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
1327	*Quercus agrifolia*	Coast live oak	5	15	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1328	*Quercus agrifolia*	Coast live oak	20	20	Critical	Critical	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1329	*Quercus agrifolia*	Coast live oak	30	15	Critical	Critical	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1330	*Quercus agrifolia*	Coast live oak	10	5	Critical	Critical	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
1331	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	2	10.63	8	7	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1332	*Quercus agrifolia*	Coast live oak	35	30	Dead	Dead	2	26.00	24	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1333	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
1334	*Quercus agrifolia*	Coast live oak	30	20	Critical	Poor	2	21.19	20	7	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1335	*Quercus agrifolia*	Coast live oak	30	10	Critical	Critical	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1336	*Quercus agrifolia*	Coast live oak	35	35	Fair	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1337	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1339	*Quercus agrifolia*	Coast live oak	30	25	Poor	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1340	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1341	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
1342	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1344	*Quercus agrifolia*	Coast live oak	35	15	Poor	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1345	*Quercus agrifolia*	Coast live oak	10	15	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1346	*Quercus agrifolia*	Coast live oak	25	10	Critical	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1347	*Quercus agrifolia*	Coast live oak	20	10	Critical	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1348	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1349	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1350	*Quercus agrifolia*	Coast live oak	25	20	Critical	Critical	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1351	*Quercus agrifolia*	Coast live oak	40	30	Poor	Fair	1	18.00	18	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1352	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1353	*Quercus agrifolia*	Coast live oak	25	10	Critical	Critical	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1354	*Quercus agrifolia*	Coast live oak	15	10	Critical	Critical	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1355	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1356	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1357	*Quercus agrifolia*	Coast live oak	35	35	Fair	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1358	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1359	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	2	18.38	13	13	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1360	*Quercus agrifolia*	Coast live oak	35	35	Critical	Poor	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1361	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1362	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1363	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	58.00	58	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1365	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	2	30.61	24	19	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1366	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1367	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1368	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1369	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1371	*Quercus agrifolia*	Coast live oak	30	20	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1372	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1373	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1374	*Quercus agrifolia*	Coast live oak	25	25	Dead	Dead	2	17.49	15	9	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1375	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	4	22.47	2	1	10	20	-	-	Mesa Verde onsite	Removal	Heritage	
1375	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	4	22.47	2	1	10	20	-	-	Mesa Verde onsite	Removal	Heritage	
1376	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1377	*Quercus agrifolia*	Coast live oak	20	20	Poor	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1378	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1379	*Quercus agrifolia*	Coast live oak	20	20	Fair	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1380	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	2	18.38	13	13	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1381	*Quercus agrifolia*	Coast live oak	10	15	Critical	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1382	*Quercus agrifolia*	Coast live oak	25	20	Poor	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1383	*Quercus agrifolia*	Coast live oak	35	30	Poor	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1384	*Quercus agrifolia*	Coast live oak	30	15	Poor	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1385	*Quercus agrifolia*	Coast live oak	25	20	Poor	Fair	3	9.90	9	4	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1386	*Quercus agrifolia*	Coast live oak	15	10	Critical	Critical	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1387	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	2	15.65	7	14	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1388	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	2	15.00	12	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1389	*Quercus agrifolia*	Coast live oak	30	25	Poor	Poor	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1390	*Quercus agrifolia*	Coast live oak	15	10	Poor	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
1391	*Quercus agrifolia*	Coast live oak	25	25	Critical	Critical	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
1392	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1393	*Quercus agrifolia*	Coast live oak	30	30	Poor	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1394	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1395	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1396	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	3	30.82	14	15	23	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1397	*Quercus agrifolia*	Coast live oak	25	20	Poor	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1398	*Quercus agrifolia*	Coast live oak	25	15	Critical	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1399	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1400	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	2	6.32	2	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1401	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1401	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	21.00	21	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1402	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	2	17.09	16	6	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1403	*Quercus agrifolia*	Coast live oak	25	20	Critical	Critical	3	7.35	2	1	7	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1404	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1405	*Quercus agrifolia*	Coast live oak	30	40	Dead	Dead	3	34.89	30	11	14	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1406	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1407	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1408	*Quercus agrifolia*	Coast live oak	15	20	Critical	Critical	3	15.36	6	2	14	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1409	*Quercus agrifolia*	Coast live oak	30	30	Dead	Dead	4	36.08	7	20	23	18	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1410	*Quercus agrifolia*	Coast live oak	30	35	Fair	Fair	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1411	*Quercus agrifolia*	Coast live oak	30	10	Poor	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1412	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1413	*Quercus agrifolia*	Coast live oak	25	20	Poor	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1414	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	2	19.85	13	15	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1415	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1416	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1417	*Quercus agrifolia*	Coast live oak	30	25	Dead	Dead	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1418	*Quercus agrifolia*	Coast live oak	20	15	Dead	Dead	2	11.40	7	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1419	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Dead
1422	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1423	*Quercus agrifolia*	Coast live oak	30	25	Critical	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1424	*Quercus agrifolia*	Coast live oak	20	20	Critical	Poor	3	8.31	7	4	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1425	*Quercus agrifolia*	Coast live oak	15	15	Critical	Poor	2	10.77	4	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1426	*Quercus agrifolia*	Coast live oak	25	15	Critical	Critical	2	14.14	10	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1427	*Quercus agrifolia*	Coast live oak	25	20	Critical	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1428	*Quercus agrifolia*	Coast live oak	25	20	Dead	Dead	3	12.37	9	6	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1429	*Quercus agrifolia*	Coast live oak	30	40	Good	Fair	2	38.95	26	29	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1430	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	2	14.14	10	10	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1431	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	44.00	44	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	Dead
1432	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1438	*Quercus agrifolia*	Coast live oak	25	15	Poor	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1439	*Quercus agrifolia*	Coast live oak	35	30	Fair	Fair	4	26.46	20	10	10	10	-	-	Mesa Verde onsite	Encroachment	Heritage	
1444	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1445	*Quercus agrifolia*	Coast live oak	5	5	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1449	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
1605	*Quercus agrifolia*	Coast live oak	35	50	Critical	Fair	4	41.40	16	24	21	21	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
1615	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	2	23.43	15	18	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1616	*Quercus agrifolia*	Coast live oak	35	45	Good	Fair	1	34.00	34	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1776	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1780	*Quercus agrifolia*	Coast live oak	30	35	Fair	Poor	2	35.36	25	25	-	-	-	-	Mesa Verde onsite	Encroachment	Heritage	
1782	*Quercus agrifolia*	Coast live oak	35	20	Critical	Critical	1	48.00	48	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1783	*Quercus agrifolia*	Coast live oak	12	6	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
1784	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	1	15.00	15	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1785	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1786	*Quercus agrifolia*	Coast live oak	12	10	Poor	Critical	2	32.56	24	22	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1787	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
1790	*Quercus agrifolia*	Coast live oak	10	20	Fair	Poor	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
1790	*Quercus agrifolia*	Coast live oak	10	20	Fair	Poor	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
1792	*Quercus agrifolia*	Coast live oak	25	30	Good	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Encroachment	Heritage	
1793	*Quercus agrifolia*	Coast live oak	30	35	Good	Fair	1	22.00	22	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1794	*Quercus agrifolia*	Coast live oak	20	18	Good	Fair	1	12.00	12	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1795	*Quercus agrifolia*	Coast live oak	15	20	Good	Fair	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	

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Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
1796	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
1796	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
1797	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	26.00	26	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1798	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1798	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	13.00	13	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1799	*Quercus agrifolia*	Coast live oak	30	25	Fair	Fair	1	24.00	24	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1800	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
1801	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	18.00	18	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
1801	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	18.00	18	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2001	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	10.00	5	5	5	4	3	-	Mesa Verde onsite	Preserved/avoided	Protected	
2002	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	7.07	5	4	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2003	*Quercus berberidifolia*	Scrub oak	6	7	Good	Good	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2004	*Quercus berberidifolia*	Scrub oak	7	6	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
2005	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	4	6.56	3	4	3	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	Wood rat nest
2006	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2007	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2008	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2009	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2010	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2011	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2012	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2013	*Quercus berberidifolia*	Scrub oak	7	8	Good	Fair	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2014	*Quercus berberidifolia*	Scrub oak	6	8	Good	Fair	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2015	*Quercus berberidifolia*	Scrub oak	6	8	Good	Fair	6	5.83	2	2	3	3	2	2	Mesa Verde onsite	Removal	Protected	
2016	*Quercus berberidifolia*	Scrub oak	6	8	Good	Fair	10	4.00	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2017	*Quercus berberidifolia*	Scrub oak	6	8	Good	Fair	10	4.69	2	2	1	2	2	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2018	*Quercus berberidifolia*	Scrub oak	8	10	Good	Fair	3	11.00	6	6	7	-	-	-	Mesa Verde onsite	Removal	Protected	
2019	*Quercus berberidifolia*	Scrub oak	8	10	Good	Fair	2	10.82	9	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2020	*Quercus berberidifolia*	Scrub oak	8	6	Good	Good	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2021	*Quercus berberidifolia*	Scrub oak	8	6	Good	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2022	*Quercus berberidifolia*	Scrub oak	8	10	Good	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2023	*Quercus berberidifolia*	Scrub oak	8	10	Good	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2024	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2025	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2026	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	3.61	2	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2027	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	5.00	4	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2028	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2029	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2030	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	8	10.44	4	3	5	3	4	4	Mesa Verde onsite	Removal	Protected	3, 3
2031	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	9	3.00	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1
2032	*Quercus berberidifolia*	Scrub oak	4	5	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2033	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	7.81	6	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2034	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2035	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2036	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2037	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2038	*Quercus berberidifolia*	Scrub oak	10	12	Fair	Fair	7	14.11	9	4	5	6	4	3	Mesa Verde onsite	Removal	Heritage	4
2039	*Quercus berberidifolia*	Scrub oak	8	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2040	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2041	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2042	*Quercus berberidifolia*	Scrub oak	8	12	Fair	Fair	2	11.18	10	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2043	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	2	8.54	8	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2044	*Quercus berberidifolia*	Scrub oak	4	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2045	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2046	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	3	5.10	3	4	1	-	-	-	Mesa Verde onsite	Removal	Protected	Old tag 1752
2047	*Quercus berberidifolia*	Scrub oak	7	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2048	*Quercus berberidifolia*	Scrub oak	8	7	Poor	Poor	2	8.54	8	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2049	*Quercus berberidifolia*	Scrub oak	18	10	Dead	Dead	2	13.42	12	6	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2050	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	2	6.32	6	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2051	*Quercus berberidifolia*	Scrub oak	12	15	Fair	Fair	7	12.69	6	5	4	6	4	4	Mesa Verde onsite	Removal	Heritage	4
2052	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	11.36	6	4	4	5	6	-	Mesa Verde onsite	Removal	Protected	
2053	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	5	5.48	3	3	2	2	2	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2054	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	6	10.10	3	6	4	3	4	4	Mesa Verde onsite	Removal	Protected	1741
2055	*Quercus berberidifolia*	Scrub oak	5	15	Dead	Dead	4	14.07	10	8	5	3	-	-	Mesa Verde onsite	Removal	Heritage	
2056	*Quercus berberidifolia*	Scrub oak	8	15	Fair	Fair	3	9.64	8	2	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2057	*Quercus berberidifolia*	Scrub oak	6	10	Poor	Fair	4	8.00	4	4	4	4	-	-	Mesa Verde onsite	Removal	Protected	
2058	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	3	3.74	2	3	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2059	*Quercus berberidifolia*	Scrub oak	6	6	Dead	Dead	3	8.66	5	5	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2060	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2061	*Quercus berberidifolia*	Scrub oak	8	15	Fair	Fair	6	10.95	3	6	5	5	3	4	Mesa Verde onsite	Removal	Protected	
2062	*Quercus berberidifolia*	Scrub oak	6	8	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2063	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	3	5.83	4	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2064	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	3	9.85	5	6	6	-	-	-	Mesa Verde onsite	Removal	Protected	Fallen
2065	*Quercus berberidifolia*	Scrub oak	10	12	Fair	Fair	2	7.81	5	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2066	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2067	*Quercus berberidifolia*	Scrub oak	8	10	Poor	Poor	3	6.40	3	4	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2068	*Quercus berberidifolia*	Scrub oak	8	8	Dead	Dead	2	8.49	6	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2069	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2070	*Quercus berberidifolia*	Scrub oak	12	12	Poor	Fair	6	14.42	7	3	6	5	8	5	Mesa Verde onsite	Removal	Heritage	
2071	*Quercus berberidifolia*	Scrub oak	12	12	Critical	Fair	6	13.93	7	2	6	5	8	4	Mesa Verde onsite	Removal	Heritage	
2072	*Quercus berberidifolia*	Scrub oak	12	12	Critical	Fair	4	11.40	8	5	4	5	-	-	Mesa Verde onsite	Removal	Protected	
2073	*Quercus berberidifolia*	Scrub oak	10	12	Critical	Critical	5	7.94	3	5	4	3	2	-	Mesa Verde onsite	Removal	Protected	
2074	*Quercus berberidifolia*	Scrub oak	8	10	Critical	Critical	6	7.48	3	3	4	3	2	3	Mesa Verde onsite	Removal	Protected	
2075	*Quercus berberidifolia*	Scrub oak	10	8	Critical	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2076	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2077	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2078	*Quercus berberidifolia*	Scrub oak	8	10	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2079	*Quercus berberidifolia*	Scrub oak	7	10	Fair	Fair	3	5.10	4	1	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2080	*Quercus berberidifolia*	Scrub oak	15	12	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2081	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2082	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2083	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2084	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Fair	2	2.24	1	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2085	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	5.39	3	2	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2086	*Quercus berberidifolia*	Scrub oak	10	12	Critical	Critical	4	9.85	4	6	6	3	-	-	Mesa Verde onsite	Removal	Protected	
2087	*Quercus berberidifolia*	Scrub oak	8	10	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	1712
2088	*Quercus berberidifolia*	Scrub oak	5	8	Critical	Poor	6	5.74	4	2	2	2	2	1	Mesa Verde onsite	Removal	Protected	
2089	*Quercus berberidifolia*	Scrub oak	10	8	Poor	Poor	4	5.74	4	2	3	2	-	-	Mesa Verde onsite	Removal	Protected	
2090	*Quercus berberidifolia*	Scrub oak	8	6	Fair	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2091	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	5	7.14	1	6	1	2	3	-	Mesa Verde onsite	Removal	Protected	
2092	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	7.00	1	4	4	4	-	-	Mesa Verde onsite	Removal	Protected	
2093	*Quercus berberidifolia*	Scrub oak	5	12	Dead	Dead	5	10.10	4	4	6	5	3	-	Mesa Verde onsite	Removal	Protected	
2094	*Quercus berberidifolia*	Scrub oak	4	8	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2095	*Quercus berberidifolia*	Scrub oak	4	8	Fair	Poor	6	5.83	2	3	3	2	2	2	Mesa Verde onsite	Removal	Protected	
2096	*Quercus berberidifolia*	Scrub oak	6	12	Fair	Poor	9	7.81	2	3	3	2	2	2	Mesa Verde onsite	Removal	Protected	3,3,3
2097	*Quercus berberidifolia*	Scrub oak	6	12	Fair	Poor	4	7.55	4	4	3	4	-	-	Mesa Verde onsite	Removal	Protected	1707
2098	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2099	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2100	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2101	*Quercus berberidifolia*	Scrub oak	6	5	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2102	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2103	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Fair	2	6.32	2	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2104	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	5	10.54	5	6	5	4	3	-	Mesa Verde onsite	Removal	Protected	
2105	*Quercus berberidifolia*	Scrub oak	6	10	Fair	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2106	*Quercus berberidifolia*	Scrub oak	7	10	Fair	Fair	6	3.46	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2107	*Quercus berberidifolia*	Scrub oak	7	10	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2108	*Quercus berberidifolia*	Scrub oak	4	6	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2109	*Quercus berberidifolia*	Scrub oak	4	6	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2110	*Quercus berberidifolia*	Scrub oak	4	6	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2111	*Quercus berberidifolia*	Scrub oak	6	8	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2112	*Quercus berberidifolia*	Scrub oak	6	8	Poor	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2113	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	6	3.00	1	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2114	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	6	5.00	1	2	1	3	3	1	Mesa Verde onsite	Removal	Protected	
2115	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	6	4.80	1	2	2	3	2	1	Mesa Verde onsite	Removal	Protected	

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Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2116	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	6	4.80	1	2	2	3	2	1	Mesa Verde onsite	Removal	Protected	
2117	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	6	4.80	1	2	2	3	2	1	Mesa Verde onsite	Removal	Protected	
2118	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	8.25	8	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2119	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	3.74	3	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2120	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2121	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	3	6.00	4	2	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2122	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	8	6.48	2	3	2	2	2	2	Mesa Verde onsite	Removal	Protected	2,3
2123	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	3	5.39	4	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2124	*Quercus berberidifolia*	Scrub oak	4	5	Fair	Fair	6	4.90	4	1	2	1	1	1	Mesa Verde onsite	Removal	Protected	
2125	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	6	4.47	2	1	2	1	3	1	Mesa Verde onsite	Removal	Protected	
2126	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	8.12	4	5	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2127	*Quercus berberidifolia*	Scrub oak	4	5	Critical	Fair	2	3.61	2	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2128	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	4	7.81	4	5	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2129	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Fair	3	2.45	1	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2130	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	5	3.32	1	2	1	1	2	-	Mesa Verde onsite	Removal	Protected	
2131	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2132	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Fair	3	5.39	2	3	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2133	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	3	5.39	2	3	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2134	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Fair	3	7.07	5	3	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2135	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2136	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	6.32	6	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2137	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Fair	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2138	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Fair	3	9.00	6	3	6	-	-	-	Mesa Verde onsite	Removal	Protected	
2139	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2140	*Quercus berberidifolia*	Scrub oak	8	10	Poor	Fair	4	9.90	8	4	3	3	-	-	Mesa Verde onsite	Removal	Protected	
2141	*Quercus berberidifolia*	Scrub oak	8	10	Critical	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	16
2142	*Quercus berberidifolia*	Scrub oak	8	10	Poor	Fair	3	6.71	5	2	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2143	*Quercus berberidifolia*	Scrub oak	8	10	Poor	Fair	5	8.37	5	4	4	2	3	-	Mesa Verde onsite	Removal	Protected	
2144	*Quercus berberidifolia*	Scrub oak	6	5	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	1664
2145	*Quercus berberidifolia*	Scrub oak	8	6	Fair	Fair	3	6.56	5	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	1665
2146	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Poor	2	5.00	4	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2147	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Poor	2	7.81	6	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2148	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Poor	2	5.39	5	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2149	*Quercus berberidifolia*	Scrub oak	8	6	Fair	Fair	3	5.39	4	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2150	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	8.49	6	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2151	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	3	9.00	6	6	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2152	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	3	7.35	6	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	1688
2153	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	6.16	5	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2154	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2155	*Quercus berberidifolia*	Scrub oak	4	9	Fair	Fair	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2156	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	3	6.00	4	4	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2157	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	4.90	4	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	Wood rats nest, 1703
2158	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	5	3.74	2	2	2	1	1	-	Mesa Verde onsite	Removal	Protected	
2159	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	5	3.74	2	2	2	1	1	-	Mesa Verde onsite	Removal	Protected	
2160	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	7	4.69	2	2	2	1	1	2	Mesa Verde onsite	Removal	Protected	2
2161	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	5	3.74	2	2	2	1	1	-	Mesa Verde onsite	Removal	Protected	
2162	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	4	8.00	4	4	4	4	-	-	Mesa Verde onsite	Removal	Protected	
2163	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2164	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2165	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2166	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	3	5.74	4	1	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2167	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	4	6.00	3	3	3	3	-	-	Mesa Verde onsite	Removal	Protected	
2168	*Quercus berberidifolia*	Scrub oak	6	10	Critical	Poor	3	8.77	8	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	1655
2169	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	5	15.68	8	6	9	7	4	-	Mesa Verde onsite	Removal	Heritage	
2170	*Quercus berberidifolia*	Scrub oak	3	10	Poor	Poor	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2171	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2172	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2173	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2174	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2175	*Quercus berberidifolia*	Scrub oak	4	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2176	*Quercus berberidifolia*	Scrub oak	5	6	Critical	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2177	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	1656

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2178	*Quercus berberidifolia*	Scrub oak	5	2	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2179	*Quercus agrifolia*	Coast live oak	20	25	Fair	Fair	1	22.00	22	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2180	*Quercus berberidifolia*	Scrub oak	5	6	Poor	Poor	8	3.32	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2181	*Quercus berberidifolia*	Scrub oak	5	6	Poor	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2182	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2183	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2184	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2185	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	6	5.00	3	3	2	1	1	1	Mesa Verde onsite	Removal	Protected	
2186	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2187	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	6	8.66	4	4	3	3	4	3	Mesa Verde onsite	Removal	Protected	
2188	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	6	7.48	4	3	3	3	3	2	Mesa Verde onsite	Removal	Protected	
2189	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Poor	3	5.83	4	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	1644
2190	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	1645
2191	*Quercus berberidifolia*	Scrub oak	5	8	Poor	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2192	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	5	7.00	4	2	2	4	3	-	Mesa Verde onsite	Removal	Protected	
2193	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2194	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	3	6.40	4	4	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2195	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	3	6.00	4	4	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2196	*Quercus berberidifolia*	Scrub oak	6	5	Poor	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2197	*Quercus berberidifolia*	Scrub oak	8	7	Poor	Poor	2	10.00	6	8	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2198	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	12	3.46	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1
2199	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	8	6.56	6	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2200	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2201	*Quercus berberidifolia*	Scrub oak	6	6	Critical	Poor	3	4.69	3	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2202	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	6.93	4	4	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2203	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	9.38	4	6	6	-	-	-	Mesa Verde onsite	Removal	Protected	
2204	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	4	6.56	3	3	3	4	-	-	Mesa Verde onsite	Removal	Protected	
2205	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2206	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2207	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2208	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2209	*Quercus berberidifolia*	Scrub oak	4	8	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2210	*Quercus berberidifolia*	Scrub oak	4	8	Fair	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2211	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2212	*Quercus berberidifolia*	Scrub oak	7	5	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2213	*Quercus berberidifolia*	Scrub oak	7	5	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2214	*Quercus berberidifolia*	Scrub oak	6	7	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2215	*Quercus berberidifolia*	Scrub oak	10	7	Poor	Fair	2	10.77	4	10	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2216	*Quercus berberidifolia*	Scrub oak	5	6	Poor	Poor	6	3.74	3	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2217	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	5.83	4	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2218	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	6.40	6	1	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2219	*Quercus berberidifolia*	Scrub oak	6	6	Poor	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2220	*Quercus berberidifolia*	Scrub oak	7	6	Critical	Fair	3	3.32	3	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2221	*Quercus berberidifolia*	Scrub oak	6	5	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2222	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2223	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2224	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2225	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2226	*Quercus berberidifolia*	Scrub oak	6	10	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2227	*Quercus berberidifolia*	Scrub oak	6	10	Poor	Poor	2	6.71	6	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2228	*Quercus berberidifolia*	Scrub oak	6	10	Fair	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2229	*Quercus berberidifolia*	Scrub oak	6	10	Fair	Poor	7	5.66	3	2	2	1	1	2	Mesa Verde onsite	Removal	Protected	3
2230	*Quercus berberidifolia*	Scrub oak	6	6	Fair	Fair	3	3.00	2	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2231	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	5.74	5	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2232	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	3	4.12	3	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2233	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2234	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2235	*Quercus berberidifolia*	Scrub oak	5	8	Fair	Fair	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2236	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2237	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2238	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2239	*Sambucus nigra*	Elderberry	10	15	Poor	Critical	20	13.42	3	3	3	3	3	3	Mesa Verde onsite	Removal	Non-jurisdictional	3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2240	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	2	6.40	4	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2241	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	1611
2242	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2243	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2244	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Poor	2	7.21	6	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2245	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Encroachment	Protected	1,1
2246	*Quercus berberidifolia*	Scrub oak	4	1	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2247	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Poor	2	5.83	3	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2248	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Poor	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2249	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	5	8.66	3	4	4	5	3	-	Mesa Verde onsite	Preserved/avoided	Protected	
2250	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	5	6.32	3	3	2	3	3	-	Mesa Verde onsite	Preserved/avoided	Protected	
2251	*Quercus berberidifolia*	Scrub oak	5	6	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2252	*Quercus berberidifolia*	Scrub oak	6	8	Fair	Fair	3	5.83	3	4	3	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2253	*Quercus berberidifolia*	Scrub oak	4	3	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2254	*Quercus berberidifolia*	Scrub oak	4	3	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2255	*Quercus berberidifolia*	Scrub oak	4	3	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2256	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2257	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2258	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2259	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2260	*Quercus berberidifolia*	Scrub oak	6	5	Fair	Fair	2	2.24	1	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2261	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	3	5.83	3	3	4	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2262	*Quercus berberidifolia*	Scrub oak	12	10	Fair	Fair	3	12.33	10	6	4	-	-	-	Mesa Verde onsite	Removal	Heritage	
2263	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	2	5.39	5	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2264	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2265	*Sambucus nigra*	Elderberry	10	10	Poor	Poor	20	11.00	6	6	4	3	3	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2266	*Sambucus nigra*	Elderberry	10	10	Poor	Poor	20	8.60	4	3	4	3	3	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2267	*Sambucus nigra*	Elderberry	10	10	Poor	Poor	20	8.60	4	3	4	3	3	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2268	*Quercus berberidifolia*	Scrub oak	10	13	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2269	*Sambucus nigra*	Elderberry	10	15	Fair	Poor	15	16.70	12	2	6	5	6	5	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2270	*Sambucus nigra*	Elderberry	10	10	Fair	Poor	8	17.86	12	2	6	5	6	7	Mesa Verde onsite	Removal	Non-jurisdictional	3,4
2271	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Fair	5	8.77	4	2	2	2	7	-	Mesa Verde onsite	Preserved/avoided	Protected	
2272	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2273	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Fair	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2274	*Sambucus nigra*	Elderberry	18	16	Poor	Critical	8	38.72	15	24	17	14	6	7	Mesa Verde onsite	Preserved/avoided	Mature	8,8
2275	*Sambucus nigra*	Elderberry	15	16	Poor	Critical	8	27.48	12	13	14	10	6	7	Mesa Verde onsite	Preserved/avoided	Mature	6,5
2276	*Unknown spp.-Non-native*	Unknown	30	25	Good	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Mature	
2277	*Quercus agrifolia*	Coast live oak	5	5	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2278	*Quercus agrifolia*	Coast live oak	15	10	Poor	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2279	*Quercus agrifolia*	Coast live oak	20	10	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2280	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2281	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2282	*Quercus agrifolia*	Coast live oak	15	20	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2283	*Quercus agrifolia*	Coast live oak	5	10	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2284	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2285	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	2	5.39	2	5	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2286	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Encroachment	Non-jurisdictional	
2287	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2288	*Quercus agrifolia*	Coast live oak	5	10	Fair	Poor	2	5.00	3	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2289	*Sambucus nigra*	Elderberry	20	25	Fair	Fair	5	17.72	10	10	8	5	5	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2290	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2291	*Quercus agrifolia*	Coast live oak	15	20	Poor	Poor	4	12.21	9	4	6	4	-	-	Mesa Verde onsite	Removal	Heritage	
2292	*Quercus agrifolia*	Coast live oak	10	15	Poor	Poor	7	5.83	1	1	1	3	2	3	Mesa Verde onsite	Removal	Protected	3
2293	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	3	7.28	4	6	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2294	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2295	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	4	10.54	5	6	5	5	-	-	Mesa Verde onsite	Removal	Protected	
2296	*Quercus berberidifolia*	Scrub oak	20	10	Dead	Dead	2	8.49	6	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2297	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Critical	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2298	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	6.40	4	4	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2299	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2300	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	5	10.39	4	5	3	7	3	-	Mesa Verde onsite	Removal	Protected	
2301	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2302	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	No tag
2303	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2305	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2306	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2307	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2308	*Quercus berberidifolia*	Scrub oak	20	25	Poor	Poor	9	11.62	6	1	1	1	1	5	Mesa Verde onsite	Removal	Protected	5,3,6
2309	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	2	8.60	7	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2310	*Quercus berberidifolia*	Scrub oak	25	20	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2311	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2312	*Quercus berberidifolia*	Scrub oak	25	20	Poor	Poor	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2313	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2314	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	6.32	6	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2315	*Quercus berberidifolia*	Scrub oak	15	10	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2316	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	3	5.74	4	4	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2317	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2318	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2319	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2320	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	6	3.00	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2321	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2322	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	6	4.12	3	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2323	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
2324	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2325	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2326	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Poor	2	8.49	6	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2327	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Poor	5	11.09	5	1	6	6	5	-	Mesa Verde onsite	Removal	Protected	
2328	*Quercus berberidifolia*	Scrub oak	20	10	Critical	Critical	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2329	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2330	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Poor	5	11.36	6	7	6	2	2	-	Mesa Verde onsite	Removal	Protected	
2331	*Quercus berberidifolia*	Scrub oak	15	25	Fair	Poor	4	8.54	4	4	5	4	-	-	Mesa Verde onsite	Removal	Protected	
2332	*Quercus berberidifolia*	Scrub oak	20	20	Fair	Poor	3	7.81	3	4	6	-	-	-	Mesa Verde onsite	Removal	Protected	
2333	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2334	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2335	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	3	8.37	3	6	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2336	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2337	*Quercus berberidifolia*	Scrub oak	25	30	Fair	Poor	5	12.00	6	8	2	6	2	-	Mesa Verde onsite	Removal	Heritage	
2338	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	2	8.49	6	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2339	*Quercus agrifolia*	Coast live oak	35	30	Good	Fair	1	28.00	28	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2340	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	No tag
2341	*Quercus agrifolia*	Coast live oak	20	25	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2342	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Critical	4	6.56	1	1	4	5	-	-	Mesa Verde onsite	Removal	Protected	
2343	*Quercus berberidifolia*	Scrub oak	5	15	Critical	Critical	2	7.81	5	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2344	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2345	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2346	*Quercus berberidifolia*	Scrub oak	10	12	Critical	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2347	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2348	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2349	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	2	8.60	7	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2350	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Critical	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2351	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2352	*Quercus berberidifolia*	Scrub oak	15	20	Critical	Poor	6	10.95	4	5	3	6	5	3	Mesa Verde onsite	Removal	Protected	
2353	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2355	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	5	11.45	6	5	5	6	3	-	Mesa Verde onsite	Removal	Protected	
2356	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2357	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2358	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2359	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2360	*Quercus berberidifolia*	Scrub oak	20	20	Poor	Poor	2	9.90	7	7	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2361	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Poor	5	9.75	5	2	4	5	5	-	Mesa Verde onsite	Removal	Protected	
2362	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Critical	3	11.58	7	6	7	-	-	-	Mesa Verde onsite	Removal	Protected	
2363	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2364	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2365	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Critical	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2366	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	3	2.45	1	1	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2367	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2368	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	4	3.46	1	1	1	3	-	-	Mesa Verde onsite	Removal	Protected	
2369	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2370	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2371	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2372	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	10	4.00	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2373	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	6	12.49	6	4	4	6	6	4	Mesa Verde onsite	Removal	Heritage	
2374	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2375	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2376	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2377	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2378	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2379	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2380	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2381	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2382	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2383	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2384	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2386	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2387	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2388	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2389	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2391	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2392	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2393	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2394	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2395	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2396	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Fair	4	3.61	2	2	2	1	-	-	Mesa Verde onsite	Removal	Protected	
2397	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	6	3.87	2	2	2	1	1	1	Mesa Verde onsite	Removal	Protected	
2398	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	3	4.12	2	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2399	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Fair	4	3.16	2	2	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2400	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	9.22	7	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2401	*Quercus berberidifolia*	Scrub oak	20	20	Fair	Poor	3	10.49	7	5	6	-	-	-	Mesa Verde onsite	Removal	Protected	
2402	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2403	*Quercus berberidifolia*	Scrub oak	10	20	Critical	Critical	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2404	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	3	8.66	5	5	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2406	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	5.83	4	1	4	1	-	-	Mesa Verde onsite	Removal	Protected	
2407	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	5.29	2	2	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2408	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2409	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2410	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	3	3.00	2	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2411	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	3	3.32	3	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2412	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Fair	6	5.00	1	1	1	2	3	3	Mesa Verde onsite	Removal	Protected	
2413	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2414	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	3	6.56	5	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2415	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2416	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	9	6.00	2	2	2	2	2	2	Mesa Verde onsite	Removal	Protected	2,2,2
2417	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	2	5.83	3	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2418	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2419	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	4.58	3	3	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2420	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2421	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2422	*Quercus berberidifolia*	Scrub oak	20	20	Poor	Fair	2	9.90	7	7	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2423	*Quercus berberidifolia*	Scrub oak	5	20	Fair	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2424	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	3	9.85	6	6	5	-	-	-	Mesa Verde onsite	Removal	Protected	
2425	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2426	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2427	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2428	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2429	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2430	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2431	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2432	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2433	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2434	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2435	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2436	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	3	3.74	3	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2437	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	6	4.58	4	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
2438	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2439	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2440	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2441	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2442	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2443	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2444	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	8	3.32	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2445	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2446	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2447	*Melia azedarach*	Chinaberry	30	40	Fair	Fair	1	36.00	36	-	-	-	-	-	Mesa Verde onsite	Removal	Mature	
2448	*Melia azedarach*	Chinaberry	30	20	Fair	Fair	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Mature	
2449	*Melia azedarach*	Chinaberry	25	25	Fair	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde onsite	Removal	Mature	
2450	*Melia azedarach*	Chinaberry	25	30	Fair	Fair	3	17.06	11	11	7	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2451	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2452	*Eucalyptus globulus*	Blue gum	45	20	Good	Fair	3	24.84	15	14	14	-	-	-	Mesa Verde onsite	Removal	Mature	No tag
2453	*Eucalyptus globulus*	Blue gum	60	30	Fair	Good	3	26.02	22	7	12	-	-	-	Mesa Verde onsite	Encroachment	Mature	
2454	*Eucalyptus globulus*	Blue gum	60	30	Fair	Fair	6	20.25	15	13	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	
2455	*Eucalyptus globulus*	Blue gum	60	35	Dead	Dead	5	31.81	25	9	9	9	12	-	Mesa Verde onsite	Removal	Mature	
2456	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2457	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	3	4.90	4	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2458	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	4	4.24	1	2	2	3	-	-	Mesa Verde onsite	Removal	Protected	
2459	*Quercus berberidifolia*	Scrub oak	3	20	Critical	Critical	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2460	*Quercus agrifolia*	Coast live oak	8	5	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2461	*Quercus agrifolia*	Coast live oak	35	30	Critical	Critical	1	23.00	23	-	-	-	-	-	Mesa Verde onsite	Removal	Heritage	
2463	*Quercus agrifolia*	Coast live oak	8	10	Critical	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2464	*Quercus agrifolia*	Coast live oak	7	7	Dead	Dead	2	5.83	5	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2465	*Washingtonia robusta*	Mexican fan palm	40	12	Fair	Fair	1	26.00	26	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Mature	
2466	*Unknown spp.-Dead*	Unknown	10	8	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2467	*Malosma laurina*	Sumac	15	12	Critical	Fair	5	13.42	6	6	6	6	6	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2468	*Quercus agrifolia*	Coast live oak	35	20	Fair	Fair	1	30.00	30	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2469	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	19.00	19	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2470	*Malosma laurina*	Sumac	15	25	Critical	Fair	10	14.14	4	6	6	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4,4,4
2471	*Malosma laurina*	Sumac	10	20	Critical	Fair	10	12.65	4	4	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4,4,4
2472	*Malosma laurina*	Sumac	10	15	Critical	Fair	10	12.65	4	4	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4,4,4
2473	*Quercus berberidifolia*	Scrub oak	8	5	Dead	Dead	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2474	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	6	35.50	35	2	3	3	3	2	Mesa Verde onsite	Removal	Heritage	
2475	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	6	6.63	3	2	3	3	3	2	Mesa Verde onsite	Removal	Protected	
2476	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2477	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2478	*Quercus berberidifolia*	Scrub oak	12	8	Dead	Dead	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2479	*Quercus berberidifolia*	Scrub oak	10	4	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2480	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	12	9.80	4	4	4	4	2	2	Mesa Verde onsite	Removal	Protected	2,2,2,2,2,2
2481	*Quercus berberidifolia*	Scrub oak	3	2	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2482	*Quercus berberidifolia*	Scrub oak	3	4	Fair	Fair	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
2483	*Quercus berberidifolia*	Scrub oak	5	3	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2484	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	5.10	3	3	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2485	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	6.86	3	4	3	3	2	-	Mesa Verde onsite	Removal	Protected	
2486	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2487	*Quercus berberidifolia*	Scrub oak	7	3	Critical	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2488	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	4.69	3	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2489	*Quercus berberidifolia*	Scrub oak	5	8	Critical	Poor	3	4.69	3	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
2490	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	6	6.63	3	2	3	3	3	2	Mesa Verde onsite	Removal	Protected	
2491	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2492	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2493	*Quercus berberidifolia*	Scrub oak	5	3	Dead	Dead	2	2.24	1	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2494	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Poor	2	3.16	3	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2495	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2496	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2497	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Critical	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2499	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	8	5.66	2	2	2	2	2	2	Mesa Verde onsite	Removal	Protected	2,2
2500	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2501	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	6	5.83	3	3	2	2	2	2	Mesa Verde onsite	Removal	Protected	
2502	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2503	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
2504	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	6	5.83	3	3	2	2	2	2	Mesa Verde onsite	Removal	Protected	
2505	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	4	5.10	3	2	3	2	-	-	Mesa Verde onsite	Removal	Protected	
2506	*Rhus integrifolia*	Lemonade berry	20	15	Fair	Fair	5	19.52	10	10	6	9	8	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2507	*Malosma laurina*	Sumac	20	20	Critical	Poor	5	20.74	13	10	8	9	4	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2508	*Sambucus nigra*	Elderberry	15	15	Critical	Fair	10	10.30	7	7	1	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2509	*Sambucus nigra*	Elderberry	15	15	Critical	Fair	15	9.33	5	5	5	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1
2510	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2511	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	6.40	5	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2512	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2513	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	7.35	4	4	3	3	2	-	Mesa Verde onsite	Removal	Protected	
2514	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	7	5.29	2	2	2	2	2	2	Mesa Verde onsite	Removal	Protected	2
2515	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2516	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	6	5.83	3	3	2	2	2	2	Mesa Verde onsite	Removal	Protected	
2517	*Quercus berberidifolia*	Scrub oak	5	4	Critical	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2518	*Quercus berberidifolia*	Scrub oak	5	4	Critical	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2519	*Quercus berberidifolia*	Scrub oak	5	4	Critical	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2520	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	7	4.69	2	2	2	2	2	1	Mesa Verde onsite	Removal	Protected	1
2521	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Poor	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2522	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Poor	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2524	*Malosma laurina*	Sumac	10	15	Critical	Poor	6	10.39	5	5	5	2	5	2	Mesa Verde onsite	Removal	Non-jurisdictional	
2525	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Poor	5	4.47	2	2	2	2	2	-	Mesa Verde onsite	Removal	Protected	
2526	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2527	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2528	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2529	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	4.69	3	2	2	2	1	-	Mesa Verde onsite	Removal	Protected	
2530	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	5.20	3	3	2	2	1	-	Mesa Verde onsite	Removal	Protected	
2531	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	5	3.74	2	2	2	1	1	-	Mesa Verde onsite	Removal	Protected	
2532	*Quercus berberidifolia*	Scrub oak	6	5	Critical	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2533	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	20	4.47	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2534	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2535	*Quercus berberidifolia*	Scrub oak	4	4	Fair	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2536	*Quercus berberidifolia*	Scrub oak	4	5	Critical	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2537	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	4	6.78	1	5	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2538	*Quercus berberidifolia*	Scrub oak	15	20	Dead	Dead	4	9.70	7	5	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2539	*Quercus berberidifolia*	Scrub oak	3	3	Critical	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
2540	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	4	3.61	2	1	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2542	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	15	7.07	4	3	2	2	2	2	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1,1,1,1,1
2543	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2544	*Malosma laurina*	Sumac	15	20	Fair	Fair	15	6.24	5	1	1	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1
2545	*Sambucus nigra*	Elderberry	10	15	Fair	Fair	20	14.56	7	7	7	5	5	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2546	*Quercus berberidifolia*	Scrub oak	20	8	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2547	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2548	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2549	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2550	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2551	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	20	5.66	2	2	2	2	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2552	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	3	12.25	11	5	2	-	-	-	Mesa Verde onsite	Removal	Heritage	
2553	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2554	*Quercus agrifolia*	Coast live oak	10	10	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2555	*Quercus berberidifolia*	Scrub oak	4	2	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2556	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	4	9.27	5	4	6	3	-	-	Mesa Verde onsite	Removal	Protected	
2557	*Quercus agrifolia*	Coast live oak	7	5	Fair	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2558	*Quercus berberidifolia*	Scrub oak	8	10	Fair	Fair	5	6.08	4	3	2	2	2	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2559	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	5.66	4	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2560	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	7	9.54	4	4	4	4	3	3	Mesa Verde onsite	Removal	Protected	3
2561	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	6	6.63	3	3	3	3	2	2	Mesa Verde onsite	Removal	Protected	
2562	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	6	7.75	5	3	3	3	2	2	Mesa Verde onsite	Removal	Protected	
2563	*Quercus berberidifolia*	Scrub oak	6	10	Fair	Poor	5	6.71	3	3	3	3	3	-	Mesa Verde onsite	Removal	Protected	
2564	*Quercus berberidifolia*	Scrub oak	4	5	Critical	Critical	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2565	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	8.31	6	4	3	2	2	-	Mesa Verde onsite	Removal	Protected	
2566	*Quercus berberidifolia*	Scrub oak	7	4	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2567	*Sambucus nigra*	Elderberry	20	15	Fair	Fair	7	18.36	13	7	7	7	4	2	Mesa Verde onsite	Removal	Non-jurisdictional	1
2568	*Rhus integrifolia*	Lemonade berry	15	20	Fair	Fair	6	17.03	6	8	6	9	8	3	Mesa Verde onsite	Removal	Non-jurisdictional	
2569	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2571	*Malosma laurina*	Sumac	15	15	Poor	Fair	15	19.36	5	5	5	5	5	5	Mesa Verde onsite	Removal	Non-jurisdictional	5,5,5,5,5,5,5,5,5
2572	*Rhus integrifolia*	Lemonade berry	15	20	Critical	Critical	10	7.35	5	3	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2573	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	10	3.16	1	1	1	1	1	1	Mesa Verde onsite	Encroachment	Protected	1,1,1,1
2574	*Quercus agrifolia*	Coast live oak	40	25	Fair	Poor	1	31.00	31	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2576	*Quercus agrifolia*	Coast live oak	10	5	Fair	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1
2577	*Quercus agrifolia*	Coast live oak	10	5	Poor	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2578	*Quercus berberidifolia*	Scrub oak	3	2	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2579	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2580	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2581	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2582	*Sambucus nigra*	Elderberry	10	20	Poor	Fair	15	14.49	8	7	7	2	2	2	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	2,2,2,2,2,2,2,2,2
2583	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2584	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	3	4.36	3	3	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2585	*Sambucus nigra*	Elderberry	20	15	Poor	Fair	20	13.11	5	5	5	4	4	3	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2
2586	*Quercus agrifolia*	Coast live oak	10	15	Critical	Poor	2	5.83	5	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2587	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	2	5.00	4	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2588	*Quercus agrifolia*	Coast live oak	6	5	Critical	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2589	*Quercus agrifolia*	Coast live oak	7	5	Critical	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2590	*Quercus berberidifolia*	Scrub oak	3	4	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2591	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	2	7.21	6	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2592	*Quercus agrifolia*	Coast live oak	10	10	Critical	Critical	3	4.12	3	2	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2593	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2594	*Quercus agrifolia*	Coast live oak	15	5	Critical	Poor	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2595	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	1	13.00	13	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2596	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2597	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2598	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2599	*Quercus agrifolia*	Coast live oak	10	10	Critical	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2600	*Quercus agrifolia*	Coast live oak	10	10	Critical	Poor	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
2601	*Quercus agrifolia*	Coast live oak	10	10	Critical	Poor	10	4.00	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
2602	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	10	5.00	4	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
2603	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	10	7.00	4	3	3	3	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
2604	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2605	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	20	7.00	4	3	2	2	1	1	Mesa Verde onsite	Encroachment	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2606	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	4	6.32	4	4	2	2	-	-	Mesa Verde onsite	Removal	Protected	
2607	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	4	8.49	6	4	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2608	*Quercus agrifolia*	Coast live oak	5	5	Good	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2609	*Quercus agrifolia*	Coast live oak	6	2	Good	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2610	*Quercus agrifolia*	Coast live oak	6	2	Good	Fair	2	2.24	1	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2611	*Quercus agrifolia*	Coast live oak	10	5	Good	Fair	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1
2612	*Quercus agrifolia*	Coast live oak	10	8	Fair	Fair	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Encroachment	Protected	1,1
2613	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1
2614	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	15	3.87	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1,1,1,1,1,1
2615	*Quercus agrifolia*	Coast live oak	10	5	Critical	Poor	8	3.74	2	2	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1
2616	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2617	*Olea europaea*	Olive	15	15	Poor	Fair	5	15.68	11	9	6	2	2	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2618	*Olea europaea*	Olive	15	15	Poor	Fair	4	17.64	11	9	10	3	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2619	*Olea europaea*	Olive	20	15	Poor	Fair	6	18.19	11	9	10	3	4	2	Mesa Verde onsite	Removal	Non-jurisdictional	
2620	*Olea europaea*	Olive	20	15	Poor	Fair	6	16.97	12	9	5	5	3	2	Mesa Verde onsite	Removal	Non-jurisdictional	
2621	*Olea europaea*	Olive	15	10	Poor	Fair	8	6.48	3	3	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2622	*Olea europaea*	Olive	20	15	Poor	Fair	8	10.77	5	5	5	5	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2623	*Olea europaea*	Olive	15	15	Poor	Fair	8	11.49	6	5	5	5	3	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2624	*Olea europaea*	Olive	15	15	Poor	Fair	8	15.36	11	5	5	5	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2625	*Olea europaea*	Olive	15	15	Poor	Fair	8	11.92	6	5	5	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2626	*Olea europaea*	Olive	15	15	Poor	Poor	8	10.58	6	5	5	4	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	1,1
2627	*Olea europaea*	Olive	15	15	Poor	Fair	8	17.64	10	8	7	7	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2628	*Olea europaea*	Olive	15	15	Poor	Fair	8	17.26	10	8	7	6	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2629	*Olea europaea*	Olive	15	15	Poor	Fair	8	17.03	8	8	7	8	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2630	*Olea europaea*	Olive	15	15	Poor	Fair	8	17.72	8	8	7	8	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2631	*Olea europaea*	Olive	15	15	Poor	Fair	8	15.56	7	4	7	8	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2632	*Olea europaea*	Olive	15	15	Poor	Fair	8	11.53	6	4	5	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2633	*Olea europaea*	Olive	15	15	Poor	Fair	8	9.38	6	4	4	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2634	*Olea europaea*	Olive	15	15	Poor	Fair	6	13.19	6	6	6	5	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	
2635	*Olea europaea*	Olive	15	15	Poor	Fair	6	13.93	6	6	6	5	5	6	Mesa Verde onsite	Removal	Non-jurisdictional	
2636	*Olea europaea*	Olive	15	15	Poor	Fair	8	11.70	5	4	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2637	*Olea europaea*	Olive	15	15	Poor	Fair	8	15.26	11	4	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2638	*Olea europaea*	Olive	15	15	Poor	Fair	8	12.53	6	5	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2639	*Olea europaea*	Olive	15	15	Poor	Fair	8	13.04	7	5	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2640	*Olea europaea*	Olive	15	15	Poor	Fair	8	12.08	5	5	4	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2641	*Olea europaea*	Olive	15	15	Poor	Fair	3	13.08	11	5	5	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2642	*Olea europaea*	Olive	15	15	Poor	Fair	4	17.49	11	5	4	12	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2643	*Olea europaea*	Olive	15	15	Poor	Fair	4	14.35	9	5	6	8	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2644	*Olea europaea*	Olive	15	15	Poor	Fair	8	12.37	2	6	6	7	4	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2645	*Olea europaea*	Olive	15	15	Poor	Fair	6	13.11	10	5	5	3	3	2	Mesa Verde onsite	Removal	Non-jurisdictional	
2646	*Olea europaea*	Olive	15	15	Poor	Fair	5	13.75	11	5	5	3	3	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2647	*Populus fremontii*	Cottonwood	50	30	Fair	Fair	2	16.97	12	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2648	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2649	*Quercus agrifolia*	Coast live oak	20	30	Poor	Fair	2	16.28	11	12	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2650	*Quercus agrifolia*	Coast live oak	5	2	Dead	Dead	1	16.00	16	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2651	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2652	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Fair	3	4.12	2	3	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2653	*Melia azedarach*	Chinaberry	20	25	Fair	Fair	8	12.21	6	2	6	4	4	6	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	2,1
2654	*Ailanthus altissima*	Tree of heaven	25	25	Fair	Fair	18	16.76	6	6	6	7	5	5	Mesa Verde onsite	Encroachment	Non-jurisdictional	5,3,2,2,2,2,2,2,2,2,2,2
2655	*Ailanthus altissima*	Tree of heaven	30	25	Fair	Fair	5	22.32	12	13	12	5	4	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2656	*Melia azedarach*	Chinaberry	20	30	Fair	Fair	11	20.71	5	7	7	6	15	5	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2,2
2657	*Schinus molle*	Peruvian pepper	20	25	Fair	Fair	2	17.46	16	7	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2658	*Schinus molle*	Peruvian pepper	25	35	Fair	Poor	5	19.13	17	6	4	4	3	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2659	*Melia azedarach*	Chinaberry	25	35	Fair	Fair	6	15.56	7	7	6	6	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	
2660	*Ailanthus altissima*	Tree of heaven	25	25	Fair	Fair	11	20.66	3	3	6	5	4	5	Mesa Verde onsite	Removal	Non-jurisdictional	8,4,13,3,7
2661	*Ailanthus altissima*	Tree of heaven	30	20	Fair	Fair	5	13.04	7	7	8	2	2	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2662	*Ailanthus altissima*	Tree of heaven	30	25	Fair	Fair	12	19.80	6	1	6	5	6	5	Mesa Verde onsite	Encroachment	Non-jurisdictional	1,6,5,7,1,11
2663	*Ailanthus altissima*	Tree of heaven	35	25	Fair	Fair	6	14.70	6	6	6	6	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	
2664	*Sambucus nigra*	Elderberry	25	25	Fair	Fair	10	14.42	7	5	5	7	5	4	Mesa Verde onsite	Encroachment	Non-jurisdictional	4,1,1,1
2665	*Ailanthus altissima*	Tree of heaven	35	30	Fair	Fair	3	5.20	3	3	3	-	-	-	Mesa Verde onsite	Encroachment	Non-jurisdictional	
2666	*Ailanthus altissima*	Tree of heaven	30	25	Fair	Fair	9	16.55	1	3	6	5	6	11	Mesa Verde onsite	Removal	Non-jurisdictional	6,3,1
2667	*Ailanthus altissima*	Tree of heaven	25	20	Fair	Fair	6	11.27	6	5	6	2	1	5	Mesa Verde onsite	Removal	Non-jurisdictional	
2668	*Ailanthus altissima*	Tree of heaven	30	30	Fair	Fair	6	11.05	2	4	6	5	4	5	Mesa Verde onsite	Removal	Non-jurisdictional	
2669	*Sambucus nigra*	Elderberry	25	30	Fair	Fair	5	10.10	3	4	5	6	4	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2670	*Ailanthus altissima*	Tree of heaven	30	20	Fair	Fair	9	9.95	4	3	3	7	1	1	Mesa Verde onsite	Encroachment	Non-jurisdictional	3,2,1
2671	*Ailanthus altissima*	Tree of heaven	30	20	Fair	Fair	9	9.17	7	3	1	3	2	1	Mesa Verde onsite	Encroachment	Non-jurisdictional	3,1,1
2672	*Ailanthus altissima*	Tree of heaven	25	25	Fair	Fair	9	9.27	4	3	4	4	3	3	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	3,1,1
2673	*Melia azedarach*	Chinaberry	25	30	Fair	Fair	7	12.69	6	5	5	5	5	3	Mesa Verde onsite	Removal	Non-jurisdictional	4
2674	*Melia azedarach*	Chinaberry	20	25	Fair	Fair	30	6.93	2	2	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2675	*Melia azedarach*	Chinaberry	20	25	Fair	Fair	30	5.74	2	1	1	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
2676	*Sambucus nigra*	Elderberry	20	20	Poor	Fair	6	14.63	7	7	7	7	3	3	Mesa Verde onsite	Removal	Non-jurisdictional	
2677	*Salix spp.*	Willow	35	40	Poor	Fair	5	21.91	12	12	8	8	8	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2678	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Fair	4	6.00	3	3	3	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2678	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Fair	4	6.00	3	3	3	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2679	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	No tag
2680	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Fair	4	6.00	3	3	3	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2681	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	2	12.73	9	9	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2682	*Quercus berberidifolia*	Scrub oak	20	10	Poor	Poor	8	7.48	1	1	3	3	3	3	Mesa Verde onsite	Removal	Protected	3,3
2683	*Quercus agrifolia*	Coast live oak	25	25	Good	Poor	1	17.00	17	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2684	*Quercus agrifolia*	Coast live oak	25	30	Fair	Poor	2	20.62	16	13	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2685	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2686	*Quercus agrifolia*	Coast live oak	5	5	Critical	Critical	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2687	*Quercus agrifolia*	Coast live oak	25	15	Poor	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2688	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2689	*Quercus agrifolia*	Coast live oak	10	15	Fair	Fair	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2690	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2691	*Sambucus nigra*	Elderberry	10	20	Fair	Fair	4	11.62	9	5	5	2	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2692	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2693	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Fair	2	7.07	5	5	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2694	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2695	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2696	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2697	*Unknown spp.-Dead*	Unknown	10	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2698	*Quercus agrifolia*	Coast live oak	10	7	Fair	Poor	5	4.47	2	2	2	2	2	-	Mesa Verde onsite	Removal	Protected	
2699	*Olea europaea*	Olive	12	15	Critical	Poor	5	14.35	7	7	6	6	6	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2700	*Olea europaea*	Olive	12	15	Critical	Poor	10	18.25	7	7	6	6	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	5,4,5,5
2701	*Olea europaea*	Olive	12	15	Critical	Poor	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2702	*Olea europaea*	Olive	12	15	Critical	Poor	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2703	*Olea europaea*	Olive	12	15	Critical	Poor	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2704	*Olea europaea*	Olive	12	15	Critical	Poor	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2705	*Olea europaea*	Olive	12	15	Poor	Poor	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2706	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2707	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2708	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2709	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2710	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2711	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.28	7	7	6	8	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	8
2712	*Olea europaea*	Olive	12	15	Fair	Fair	2	18.38	13	13	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2714	*Olea europaea*	Olive	12	15	Fair	Fair	7	16.64	5	10	5	3	10	3	Mesa Verde onsite	Removal	Non-jurisdictional	3
2715	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.95	10	10	5	4	10	3	Mesa Verde onsite	Removal	Non-jurisdictional	3
2716	*Olea europaea*	Olive	12	15	Fair	Fair	7	18.95	10	10	5	4	10	3	Mesa Verde onsite	Removal	Non-jurisdictional	3
2717	*Olea europaea*	Olive	12	15	Fair	Fair	6	13.96	10	6	5	4	3	3	Mesa Verde onsite	Removal	Non-jurisdictional	
2718	*Olea europaea*	Olive	12	15	Poor	Fair	15	18.19	10	6	5	4	12	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1
2719	*Olea europaea*	Olive	12	15	Poor	Fair	15	13.75	9	6	5	6	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1
2720	*Olea europaea*	Olive	12	15	Poor	Fair	15	17.44	12	6	9	4	3	3	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1,1,1,1,1
2721	*Olea europaea*	Olive	12	15	Fair	Fair	4	17.38	13	6	9	4	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2722	*Olea europaea*	Olive	12	15	Fair	Fair	4	17.38	13	6	9	4	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2723	*Olea europaea*	Olive	12	15	Fair	Fair	10	22.54	13	10	8	13	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2724	*Olea europaea*	Olive	12	15	Fair	Fair	10	17.75	10	8	9	4	7	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2725	*Olea europaea*	Olive	12	15	Fair	Fair	10	20.83	10	10	12	6	7	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2726	*Olea europaea*	Olive	12	15	Fair	Fair	10	26.31	10	10	12	10	10	12	Mesa Verde onsite	Removal	Mature	1,1,1,1
2727	*Olea europaea*	Olive	12	15	Poor	Poor	7	18.36	13	10	8	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1
2728	*Olea europaea*	Olive	12	15	Poor	Poor	6	17.75	8	13	8	4	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	
2729	*Olea europaea*	Olive	12	15	Critical	Critical	5	17.83	8	10	9	8	3	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2730	*Olea europaea*	Olive	12	15	Fair	Fair	8	18.79	8	10	9	8	3	5	Mesa Verde onsite	Removal	Non-jurisdictional	3,1
2731	*Olea europaea*	Olive	12	15	Dead	Dead	3	17.55	8	10	12	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2732	*Olea europaea*	Olive	25	20	Critical	Poor	3	31.46	25	14	13	-	-	-	Mesa Verde onsite	Removal	Mature	
2733	*Olea europaea*	Olive	15	13	Poor	Fair	5	17.89	6	2	6	10	12	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2734	*Olea europaea*	Olive	15	13	Poor	Fair	4	16.52	11	4	6	10	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2735	*Olea europaea*	Olive	15	13	Poor	Poor	4	16.49	10	10	6	6	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2736	*Olea europaea*	Olive	15	13	Poor	Poor	4	16.49	10	10	6	6	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2737	*Olea europaea*	Olive	15	13	Fair	Poor	6	22.23	10	10	8	10	7	9	Mesa Verde onsite	Removal	Non-jurisdictional	
2738	*Olea europaea*	Olive	15	13	Fair	Fair	10	23.66	10	10	8	10	7	9	Mesa Verde onsite	Removal	Non-jurisdictional	4,4,3,5
2739	*Olea europaea*	Olive	15	13	Fair	Fair	10	20.40	10	10	6	2	8	9	Mesa Verde onsite	Removal	Non-jurisdictional	3,3,3,2
2740	*Olea europaea*	Olive	15	13	Poor	Fair	8	17.89	10	6	6	4	7	9	Mesa Verde onsite	Removal	Non-jurisdictional	1,1
2741	*Olea europaea*	Olive	15	13	Poor	Fair	7	17.52	12	6	6	4	7	5	Mesa Verde onsite	Removal	Non-jurisdictional	1
2742	*Olea europaea*	Olive	15	13	Poor	Fair	10	17.20	12	12	1	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2743	*Olea europaea*	Olive	15	13	Poor	Poor	10	20.42	12	10	6	9	6	4	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2744	*Olea europaea*	Olive	15	15	Poor	Poor	10	19.80	13	10	6	9	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2745	*Olea europaea*	Olive	15	15	Poor	Poor	10	20.15	13	8	9	4	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2746	*Olea europaea*	Olive	15	15	Poor	Poor	10	20.45	13	8	9	4	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2

Appendix B- Tree Information Matrix																			
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2747	*Olea europaea*	Olive	15	15	Poor	Poor	10	19.82	12	8	9	4	6	6	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2
2748	*Olea europaea*	Olive	15	15	Poor	Poor	4	23.52	12	12	11	12	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2749	*Olea europaea*	Olive	15	15	Poor	Poor	3	16.31	11	9	8	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2750	*Olea europaea*	Olive	15	15	Poor	Poor	2	19.21	15	12	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2751	*Olea europaea*	Olive	15	20	Critical	Poor	3	23.19	15	12	13	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	Fire damage
2752	*Olea europaea*	Olive	24	20	Fair	Poor	4	26.27	15	13	14	10	-	-	Mesa Verde onsite	Removal	Mature	Wood rats nest
2753	*Olea europaea*	Olive	24	20	Fair	Poor	4	26.27	15	13	14	10	-	-	Mesa Verde onsite	Removal	Mature	Wood rats nest
2754	*Olea europaea*	Olive	24	20	Fair	Poor	4	26.27	15	13	14	10	-	-	Mesa Verde onsite	Removal	Mature	
2755	*Olea europaea*	Olive	24	20	Fair	Poor	4	26.27	15	13	14	10	-	-	Mesa Verde onsite	Removal	Mature	
2756	*Olea europaea*	Olive	24	20	Fair	Poor	4	26.27	15	13	14	10	-	-	Mesa Verde onsite	Removal	Mature	
2757	*Olea europaea*	Olive	24	20	Fair	Poor	12	21.19	14	10	12	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1,1
2758	*Olea europaea*	Olive	20	13	Fair	Poor	7	17.49	11	10	9	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1
2759	*Olea europaea*	Olive	20	15	Fair	Poor	10	20.02	13	12	9	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2760	*Olea europaea*	Olive	20	15	Fair	Poor	3	18.71	13	10	9	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2761	*Olea europaea*	Olive	20	15	Fair	Poor	4	20.52	10	10	11	10	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2762	*Olea europaea*	Olive	20	15	Fair	Poor	9	15.56	13	6	4	4	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1
2763	*Olea europaea*	Olive	20	15	Fair	Poor	4	17.32	10	6	8	10	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2764	*Olea europaea*	Olive	20	15	Fair	Poor	8	16.55	12	11	2	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1
2765	*Olea europaea*	Olive	20	15	Fair	Poor	8	17.23	12	12	2	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1
2766	*Olea europaea*	Olive	18	15	Fair	Poor	8	17.52	9	11	10	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1
2767	*Olea europaea*	Olive	18	15	Fair	Poor	8	20.35	9	11	10	8	6	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2768	*Olea europaea*	Olive	18	15	Fair	Poor	8	20.35	9	11	10	8	6	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2769	*Olea europaea*	Olive	18	15	Fair	Poor	8	23.00	14	11	10	8	6	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2770	*Olea europaea*	Olive	18	15	Fair	Poor	8	23.00	14	11	10	8	6	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2
2771	*Olea europaea*	Olive	18	15	Fair	Poor	2	18.44	14	12	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2772	*Olea europaea*	Olive	18	15	Fair	Fair	7	22.36	13	11	8	9	6	5	Mesa Verde onsite	Removal	Non-jurisdictional	2
2773	*Olea europaea*	Olive	18	15	Fair	Fair	7	15.87	8	7	6	7	7	1	Mesa Verde onsite	Removal	Non-jurisdictional	2
2774	*Olea europaea*	Olive	18	15	Fair	Fair	7	16.34	8	7	6	7	7	2	Mesa Verde onsite	Removal	Non-jurisdictional	4
2775	*Olea europaea*	Olive	18	18	Fair	Fair	8	17.26	8	5	6	7	10	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,4
2776	*Ceratonia siliqua*	Carob	10	30	Critical	Critical	1	24.00	24	-	-	-	-	-	Mesa Verde onsite	Removal	Mature	Fallen
2777	*Olea europaea*	Olive	17	15	Critical	Poor	10	20.66	11	10	10	10	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2778	*Olea europaea*	Olive	17	15	Poor	Poor	10	20.27	11	8	5	4	11	5	Mesa Verde onsite	Removal	Non-jurisdictional	6,1,1,1
2779	*Olea europaea*	Olive	17	15	Poor	Poor	5	19.24	12	8	5	4	11	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2780	*Olea europaea*	Olive	17	15	Poor	Poor	5	19.47	12	8	5	5	11	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2781	*Olea europaea*	Olive	17	15	Poor	Poor	6	21.47	12	8	8	2	11	8	Mesa Verde onsite	Removal	Non-jurisdictional	
2782	*Olea europaea*	Olive	10	15	Poor	Poor	6	15.91	12	8	4	2	4	3	Mesa Verde onsite	Removal	Non-jurisdictional	
2783	*Olea europaea*	Olive	15	15	Poor	Poor	6	18.68	12	9	11	1	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	
2784	*Olea europaea*	Olive	15	15	Poor	Poor	7	22.67	13	9	10	9	9	1	Mesa Verde onsite	Removal	Non-jurisdictional	1
2785	*Olea europaea*	Olive	4	15	Critical	Poor	8	16.34	9	5	9	4	4	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2786	*Olea europaea*	Olive	12	15	Critical	Poor	8	16.94	13	4	6	3	4	3	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2787	*Olea europaea*	Olive	12	15	Critical	Poor	10	16.28	5	6	6	8	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2788	*Olea europaea*	Olive	12	15	Critical	Poor	7	15.17	5	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1
2789	*Olea europaea*	Olive	12	15	Critical	Poor	10	15.26	5	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2790	*Olea europaea*	Olive	12	15	Critical	Poor	10	15.26	5	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2791	*Olea europaea*	Olive	12	15	Critical	Poor	10	15.26	5	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2792	*Olea europaea*	Olive	12	15	Critical	Poor	10	15.26	5	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2793	*Olea europaea*	Olive	15	15	Critical	Poor	10	15.62	6	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2794	*Olea europaea*	Olive	15	15	Critical	Poor	10	15.62	6	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2795	*Olea europaea*	Olive	15	15	Critical	Poor	10	15.62	6	8	2	6	8	6	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2796	*Olea europaea*	Olive	15	15	Critical	Poor	15	9.59	6	2	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2,2,2,2,2,2
2797	*Olea europaea*	Olive	15	15	Critical	Poor	10	16.61	6	6	7	9	7	3	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2
2798	*Olea europaea*	Olive	15	15	Critical	Poor	9	13.08	7	7	7	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2799	*Olea europaea*	Olive	15	15	Critical	Poor	9	15.20	7	7	7	8	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2800	*Olea europaea*	Olive	15	15	Critical	Poor	13	13.89	7	6	6	6	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2,2,2,2
2801	*Olea europaea*	Olive	15	15	Critical	Poor	9	17.38	7	12	6	6	3	4	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2802	*Olea europaea*	Olive	15	15	Critical	Poor	9	10.86	7	6	3	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2803	*Olea europaea*	Olive	15	15	Critical	Poor	9	10.05	4	4	4	4	4	3	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2804	*Olea europaea*	Olive	15	15	Poor	Poor	9	13.30	11	4	4	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2805	*Olea europaea*	Olive	15	15	Poor	Poor	9	21.54	11	11	10	7	6	5	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2806	*Olea europaea*	Olive	15	15	Poor	Poor	9	23.00	11	11	10	7	6	5	Mesa Verde onsite	Removal	Non-jurisdictional	6,5,4
2807	*Olea europaea*	Olive	15	15	Poor	Poor	4	15.72	10	7	7	7	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	fire damage
2808	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2809	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2810	*Quercus agrifolia*	Coast live oak	15	25	Fair	Poor	1	10.00	10	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2811	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2812	*Quercus agrifolia*	Coast live oak	25	20	Critical	Poor	1	9.00	9	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2813	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	4	9.59	3	3	5	7	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2814	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2815	*Quercus agrifolia*	Coast live oak	12	16	Poor	Poor	4	9.90	9	3	2	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2816	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2817	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2818	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Fair	5	13.45	3	8	6	6	6	-	Mesa Verde onsite	Encroachment	Heritage	
2819	*Quercus berberidifolia*	Scrub oak	20	20	Fair	Fair	4	10.30	5	6	6	3	-	-	Mesa Verde onsite	Removal	Protected	
2820	*Quercus agrifolia*	Coast live oak	5	5	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2821	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2822	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	4.47	3	1	1	3	-	-	Mesa Verde onsite	Removal	Protected	
2823	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Fair	3	8.25	4	6	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2824	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	3.16	3	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2825	*Quercus agrifolia*	Coast live oak	15	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2826	*Sambucus nigra*	Elderberry	20	30	Good	Fair	8	9.38	5	3	3	3	3	3	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	3,3
2827	*Olea europaea*	Olive	20	30	Poor	Fair	4	12.73	9	4	7	4	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2828	*Olea europaea*	Olive	20	25	Critical	Critical	8	8.54	2	2	5	3	2	3	Mesa Verde onsite	Removal	Non-jurisdictional	3,3
2829	*Olea europaea*	Olive	20	30	Critical	Critical	4	12.85	7	6	8	4	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2830	*Olea europaea*	Olive	20	20	Critical	Critical	8	13.45	7	5	3	5	5	4	Mesa Verde onsite	Removal	Non-jurisdictional	4,4
2831	*Olea europaea*	Olive	20	20	Critical	Critical	10	8.66	3	2	4	5	4	1	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1
2832	*Olea europaea*	Olive	20	20	Critical	Critical	5	11.53	6	4	6	3	6	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2833	*Olea europaea*	Olive	20	20	Fair	Fair	11	10.49	6	4	6	2	3	2	Mesa Verde onsite	Removal	Non-jurisdictional	1,1,1,1,1
2834	*Olea europaea*	Olive	20	20	Poor	Fair	5	6.93	6	3	1	1	1	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2835	*Olea europaea*	Olive	20	20	Critical	Critical	7	7.75	4	3	4	4	1	1	Mesa Verde onsite	Removal	Non-jurisdictional	1
2837	*Olea europaea*	Olive	20	20	Critical	Critical	3	8.77	6	4	5	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2838	*Olea europaea*	Olive	20	20	Critical	Critical	10	8.94	4	3	3	5	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,1
2839	*Olea europaea*	Olive	30	25	Critical	Critical	7	7.62	3	1	3	5	2	3	Mesa Verde onsite	Removal	Non-jurisdictional	1
2840	*Olea europaea*	Olive	25	25	Fair	Fair	5	11.83	8	3	3	7	3	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2841	*Olea europaea*	Olive	15	25	Fair	Fair	2	8.06	4	7	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2842	*Olea europaea*	Olive	30	25	Fair	Fair	9	12.88	8	5	6	4	3	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2
2843	*Olea europaea*	Olive	20	25	Critical	Critical	4	10.86	7	7	4	2	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2844	*Olea europaea*	Olive	25	20	Critical	Critical	7	9.33	3	3	2	4	2	6	Mesa Verde onsite	Removal	Non-jurisdictional	3
2845	*Olea europaea*	Olive	25	20	Critical	Critical	5	11.40	7	6	4	5	2	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2846	*Olea europaea*	Olive	20	20	Critical	Critical	5	10.30	7	4	4	4	3	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2847	*Olea europaea*	Olive	20	20	Critical	Critical	10	11.92	3	3	5	4	5	5	Mesa Verde onsite	Removal	Non-jurisdictional	2,3,4,2
2848	*Quercus agrifolia*	Coast live oak	2	1	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2849	*Quercus agrifolia*	Coast live oak	15	5	Critical	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2850	*Quercus agrifolia*	Coast live oak	15	15	Critical	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2851	*Quercus agrifolia*	Coast live oak	10	10	Critical	Critical	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2852	*Quercus agrifolia*	Coast live oak	20	5	Critical	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2853	*Quercus agrifolia*	Coast live oak	10	15	Critical	Critical	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2854	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2855	*Quercus agrifolia*	Coast live oak	10	10	Critical	Critical	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2856	*Quercus agrifolia*	Coast live oak	5	10	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2857	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2858	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2859	*Quercus agrifolia*	Coast live oak	5	10	Poor	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2860	*Quercus berberidifolia*	Scrub oak	25	30	Critical	Critical	7	15.00	6	7	8	7	5	1	Mesa Verde onsite	Removal	Heritage	1
2861	*Quercus agrifolia*	Coast live oak	15	10	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2862	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2863	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2864	*Quercus agrifolia*	Coast live oak	5	2	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	No tag poison oak
2865	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2866	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2867	*Quercus agrifolia*	Coast live oak	15	20	Fair	Fair	4	8.06	3	4	6	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2868	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2869	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Critical	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
2870	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2871	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2872	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2873	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2874	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2875	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2876	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2877	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2878	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2879	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2880	*Quercus berberidifolia*	Scrub oak	3	5	Poor	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2881	*Quercus berberidifolia*	Scrub oak	3	5	Critical	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2882	*Quercus berberidifolia*	Scrub oak	3	10	Critical	Critical	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2883	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2884	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2885	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	2	4.47	4	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2886	*Quercus agrifolia*	Coast live oak	20	20	Dead	Dead	1	12.00	12	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2887	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2888	*Unknown spp.-Dead*	Unknown	10	20	Dead	Dead	2	10.77	10	4	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2889	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2890	*Quercus agrifolia*	Coast live oak	5	5	Poor	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2891	*Quercus berberidifolia*	Scrub oak	4	3	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2892	*Quercus berberidifolia*	Scrub oak	3	2	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2893	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2894	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2895	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2896	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2897	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2898	*Quercus berberidifolia*	Scrub oak	4	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2899	*Quercus berberidifolia*	Scrub oak	4	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2900	*Quercus berberidifolia*	Scrub oak	4	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2901	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2902	*Quercus agrifolia*	Coast live oak	6	3	Poor	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2903	*Quercus agrifolia*	Coast live oak	5	5	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2904	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	2	2.24	1	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2905	*Quercus agrifolia*	Coast live oak	5	10	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2906	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2910	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2911	*Quercus agrifolia*	Coast live oak	5	5	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2912	*Ailanthus altissima*	Tree of heaven	30	15	Poor	Poor	5	5.39	5	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2914	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	3	6.63	6	2	2	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2915	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	3	4.12	3	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
2916	*Quercus agrifolia*	Coast live oak	25	25	Poor	Poor	3	13.38	7	11	3	-	-	-	Mesa Verde onsite	Removal	Heritage	
2917	*Quercus agrifolia*	Coast live oak	5	5	Poor	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2918	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2919	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	2	8.60	5	7	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2920	*Quercus berberidifolia*	Scrub oak	30	25	Good	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	No tag
2921	*Quercus agrifolia*	Coast live oak	25	40	Good	Fair	2	18.87	16	10	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2922	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2923	*Quercus agrifolia*	Coast live oak	5	2	Fair	Fair	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2924	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2925	*Quercus agrifolia*	Coast live oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2925	*Quercus agrifolia*	Coast live oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2926	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2927	*Quercus agrifolia*	Coast live oak	15	15	Dead	Dead	2	7.28	7	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2928	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2929	*Quercus berberidifolia*	Scrub oak	5	20	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2930	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	5.39	3	2	4	-	-	-	Mesa Verde onsite	Removal	Protected	
2931	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2932	*Quercus berberidifolia*	Scrub oak	4	4	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2933	*Quercus agrifolia*	Coast live oak	10	5	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2934	*Quercus agrifolia*	Coast live oak	10	10	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2935	*Quercus agrifolia*	Coast live oak	15	10	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2936	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2937	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	
2938	*Sambucus nigra*	Elderberry	25	20	Fair	Fair	5	10.58	7	6	5	1	1	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2939	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2940	*Quercus agrifolia*	Coast live oak	25	25	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2941	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	4	7.00	5	2	4	2	-	-	Mesa Verde onsite	Removal	Protected	
2942	*Quercus agrifolia*	Coast live oak	10	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2943	*Quercus agrifolia*	Coast live oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2944	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2945	*Quercus agrifolia*	Coast live oak	15	15	Poor	Fair	4	6.32	4	2	2	4	-	-	Mesa Verde onsite	Encroachment	Protected	
2946	*Fraxinus velutina*	Velvet ash	30	30	Fair	Fair	3	15.78	10	10	7	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2947	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2948	*Sambucus nigra*	Elderberry	25	5	Poor	Poor	8	21.45	13	8	4	7	12	4	Outside of project boundary	Preserved/avoided	Non-jurisdictional	1,1
2949	*Sambucus nigra*	Elderberry	25	25	Fair	Poor	4	13.49	9	9	4	2	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2950	*Quercus agrifolia*	Coast live oak	5	3	Fair	Fair	1	1.00	1	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2951	*Quercus agrifolia*	Coast live oak	20	5	Fair	Fair	1	2.00	2	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2953	*Quercus agrifolia*	Coast live oak	10	10	Fair	Poor	1	2.00	2	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2954	*Quercus agrifolia*	Coast live oak	20	5	Dead	Dead	2	2.83	2	2	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2955	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	4.00	4	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2956	*Quercus agrifolia*	Coast live oak	20	20	Fair	Fair	6	10.15	7	4	4	3	2	3	Outside of project boundary	Preserved/avoided	Protected	
2957	*Quercus agrifolia*	Coast live oak	30	30	Fair	Fair	2	21.93	15	16	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2958	*Quercus agrifolia*	Coast live oak	25	25	Fair	Poor	2	16.12	16	2	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2959	*Quercus agrifolia*	Coast live oak	10	20	Critical	Critical	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2960	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	9.00	9	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2961	*Quercus agrifolia*	Coast live oak	35	35	Fair	Fair	1	24.00	24	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2962	*Quercus agrifolia*	Coast live oak	15	25	Fair	Poor	1	12.00	12	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
2963	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	1	9.00	9	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2964	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	1	9.00	9	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2965	*Quercus agrifolia*	Coast live oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2966	*Quercus agrifolia*	Coast live oak	2	4	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2966	*Quercus agrifolia*	Coast live oak	2	4	Fair	Fair	1	1.00	1	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2967	*Quercus agrifolia*	Coast live oak	25	25	Poor	Poor	3	15.68	10	5	11	-	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
2968	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	2	5.10	5	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2969	*Quercus agrifolia*	Coast live oak	20	15	Critical	Critical	2	7.62	7	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2970	*Quercus agrifolia*	Coast live oak	20	15	Critical	Critical	1	8.00	8	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2971	*Quercus agrifolia*	Coast live oak	15	15	Critical	Critical	1	10.00	10	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2972	*Quercus agrifolia*	Coast live oak	15	10	Dead	Dead	4	3.16	2	2	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2973	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
2973	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	4.24	3	3	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
2974	*Robinia pseudoacacia*	Black locust	30	30	Fair	Fair	3	19.72	12	7	14	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2974	*Robinia pseudoacacia*	Black locust	30	30	Fair	Fair	3	19.72	12	7	14	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2975	*Robinia pseudoacacia*	Black locust	25	20	Fair	Fair	4	11.09	3	5	5	8	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2975	*Robinia pseudoacacia*	Black locust	25	20	Fair	Fair	4	11.09	3	5	5	8	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2976	*Robinia pseudoacacia*	Black locust	20	15	Fair	Fair	4	13.89	8	4	7	8	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
2976	*Robinia pseudoacacia*	Black locust	20	15	Fair	Fair	4	13.89	8	4	7	8	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
2977	*Robinia pseudoacacia*	Black locust	20	15	Fair	Fair	10	10.34	4	1	1	3	4	6	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,4
2977	*Robinia pseudoacacia*	Black locust	20	15	Fair	Fair	10	10.34	4	1	1	3	4	6	Outside of project boundary	Preserved/avoided	Non-jurisdictional	2,2,2,4
2978	*Tamarix aphylla*	Athel tamarisk	25	20	Fair	Fair	10	10.91	4	4	4	2	3	5	Mesa Verde onsite	Removal	Non-jurisdictional	2,4,3,2
2978	*Tamarix aphylla*	Athel tamarisk	25	20	Fair	Fair	10	10.91	4	4	4	2	3	5	Outside of project boundary	Preserved/avoided	Non-jurisdictional	2,4,3,2
2979	*Robinia pseudoacacia*	Black locust	20	20	Fair	Fair	10	7.21	4	2	2	2	2	2	Mesa Verde onsite	Removal	Non-jurisdictional	2,2,2,2
2979	*Robinia pseudoacacia*	Black locust	20	20	Fair	Fair	10	7.21	4	2	2	2	2	2	Outside of project boundary	Preserved/avoided	Non-jurisdictional	2,2,2,2
2980	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
2981	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	6	3.87	2	2	2	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
2982	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	6	3.87	2	2	2	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
2983	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2984	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2985	*Quercus berberidifolia*	Scrub oak	10	5	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2986	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2987	*Quercus berberidifolia*	Scrub oak	15	15	Critical	Critical	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
2988	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	4	4.47	3	3	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2989	*Quercus berberidifolia*	Scrub oak	20	15	Poor	Poor	6	4.47	3	2	2	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
2990	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
2991	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Critical	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
2995	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
2996	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
2997	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
2998	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	9	3.00	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1
2999	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3000	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3001	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3002	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3003	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3004	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3005	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3006	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3007	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3008	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3009	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3010	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3011	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3012	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3013	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3014	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3015	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	6	4.69	3	3	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3016	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	4	4.24	3	2	1	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3017	*Quercus berberidifolia*	Scrub oak	10	20	Poor	Poor	6	7.75	2	4	2	2	4	4	Mesa Verde onsite	Preserved/avoided	Protected	
3018	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	3	7.07	5	4	3	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3019	*Quercus berberidifolia*	Scrub oak	15	20	Critical	Critical	6	6.00	3	3	2	2	1	3	Mesa Verde onsite	Preserved/avoided	Protected	
3020	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3021	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3022	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3023	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	4.36	3	3	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3024	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3025	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3026	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
3027	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3028	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3029	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3030	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3031	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	10	4.90	3	2	2	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1,1,1
3032	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	3
3033	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3034	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3035	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3036	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	5	10.44	5	5	7	3	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3037	*Sambucus nigra*	Elderberry	10	20	Fair	Fair	6	8.89	3	5	4	2	4	3	Mesa Verde onsite	Removal	Non-jurisdictional	
3038	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	3.16	2	2	1	1	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3039	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3040	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3041	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3042	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	5	4.47	2	2	2	2	2	-	Mesa Verde onsite	Preserved/avoided	Protected	
3043	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	4.90	2	2	2	2	2	2	Mesa Verde onsite	Preserved/avoided	Protected	
3044	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	8	6.48	3	3	2	2	2	2	Mesa Verde onsite	Preserved/avoided	Protected	2,2
3045	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	7	7.28	4	4	3	3	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
3046	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3047	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3048	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	7	5.83	3	3	3	2	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
3049	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	4	5.29	3	3	1	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3050	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	7	4.00	2	2	2	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	1
3051	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3052	*Quercus berberidifolia*	Scrub oak	5	2	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3053	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Fair	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3054	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Fair	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3055	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3056	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3057	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3058	*Quercus berberidifolia*	Scrub oak	4	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3059	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3060	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3061	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3062	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	6	4.80	3	2	2	2	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3063	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3064	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3065	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Fair	10	4.58	3	2	1	1	1	1	Mesa Verde onsite	Encroachment	Protected	1,1,1,1
3066	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3067	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	10	4.36	2	2	2	1	1	1	Mesa Verde onsite	Encroachment	Protected	1,1,1,1
3068	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3069	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3070	*Quercus berberidifolia*	Scrub oak	5	2	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3071	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3072	*Quercus berberidifolia*	Scrub oak	4	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3073	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	3.74	2	2	2	1	1	-	Mesa Verde onsite	Encroachment	Protected	
3074	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	4.58	3	3	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3075	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	4.58	3	3	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3076	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Fair	8	5.10	2	2	2	2	2	2	Mesa Verde onsite	Preserved/avoided	Protected	1,1
3077	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Fair	8	6.93	3	3	3	3	3	1	Mesa Verde onsite	Preserved/avoided	Protected	1,1
3078	*Olea europaea*	Olive	15	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3079	*Olea europaea*	Olive	25	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3080	*Olea europaea*	Olive	25	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3081	*Olea europaea*	Olive	25	30	Poor	Poor	4	14.66	9	7	6	7	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3082	*Olea europaea*	Olive	25	30	Poor	Poor	4	16.25	10	8	8	6	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3083	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Preserved/avoided	Protected	
3084	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3085	*Olea europaea*	Olive	20	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Encroachment	Non-jurisdictional	
3086	*Olea europaea*	Olive	20	25	Poor	Poor	7	13.23	5	5	5	5	5	5	Mesa Verde onsite	Encroachment	Non-jurisdictional	5
3087	*Olea europaea*	Olive	20	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Encroachment	Non-jurisdictional	
3088	*Olea europaea*	Olive	20	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Encroachment	Non-jurisdictional	
3089	*Olea europaea*	Olive	20	25	Poor	Poor	5	11.18	5	5	5	5	5	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3090	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3091	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3092	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3093	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	7	3.61	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3094	*Quercus berberidifolia*	Scrub oak	4	2	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3095	*Quercus berberidifolia*	Scrub oak	4	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3096	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3097	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3098	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3099	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3100	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3101	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3102	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3103	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3104	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3105	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3106	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	5	4.69	3	2	2	2	1	-	Mesa Verde onsite	Removal	Protected	
3107	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3108	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3109	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	3	3.74	2	3	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3110	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3111	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3112	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3113	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3114	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3115	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3116	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	6	4.24	2	2	2	2	1	1	Mesa Verde onsite	Removal	Protected	
3117	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3118	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	6.71	3	3	3	3	3	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3119	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3120	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3121	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	4	3.46	3	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3122	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3123	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	7	7.94	3	3	3	3	3	3	Mesa Verde onsite	Removal	Protected	3
3124	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3125	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3126	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3127	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3128	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3129	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3130	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3131	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3132	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3133	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3134	*Quercus berberidifolia*	Scrub oak	10	15	Good	Fair	6	22.54	3	3	22	2	1	1	Mesa Verde onsite	Removal	Heritage	
3135	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3136	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	3	3.32	3	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3137	*Quercus berberidifolia*	Scrub oak	10	15	Good	Fair	10	4.90	3	2	2	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
3138	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3139	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	5.39	4	2	3	-	-	-	Mesa Verde onsite	Removal	Protected	
3140	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Critical	4	3.46	1	1	1	3	-	-	Mesa Verde onsite	Removal	Protected	
3141	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3142	*Quercus berberidifolia*	Scrub oak	15	15	Dead	Dead	3	5.83	3	4	3	-	-	-	Mesa Verde onsite	Removal	Protected	
3143	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
3144	*Quercus berberidifolia*	Scrub oak	5	8	Critical	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3145	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	6	4.24	1	1	2	2	2	2	Mesa Verde onsite	Removal	Protected	
3146	*Quercus berberidifolia*	Scrub oak	4	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3147	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	9	6.78	3	3	4	2	2	1	Mesa Verde onsite	Removal	Protected	1,1,1
3148	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3149	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	3.32	3	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3150	*Quercus berberidifolia*	Scrub oak	5	18	Dead	dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3151	*Quercus berberidifolia*	Scrub oak	5	18	Poor	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3152	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3153	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	4.47	2	4	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3154	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3155	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3156	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3157	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	4	3.87	3	2	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3158	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3159	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	2	3.16	3	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3160	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3161	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	8	7.87	5	3	2	3	3	2	Mesa Verde onsite	Removal	Protected	1,1
3162	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3163	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
3164	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	7	3.61	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3165	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	10	3.61	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1
3166	*Tamarix aphylla*	Athel tamarisk	30	30	Fair	Fair	4	30.15	14	13	12	20	-	-	Mesa Verde onsite	Removal	Mature	
3167	*Olea europaea*	Olive	30	30	Fair	Fair	4	14.90	9	10	5	4	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3168	*Olea europaea*	Olive	30	30	Fair	Fair	2	14.14	10	10	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3169	*Olea europaea*	Olive	25	30	Poor	Poor	4	12.17	7	7	5	5	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3170	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	5	5.48	2	3	3	2	2	-	Mesa Verde onsite	Removal	Protected	
3171	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Fair	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3172	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3173	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	3	5.92	1	3	5	-	-	-	Mesa Verde onsite	Removal	Protected	
3174	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	8	3.74	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
3175	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3176	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3177	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3178	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3179	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3180	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3181	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3182	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3183	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3184	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3185	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3186	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3187	*Quercus berberidifolia*	Scrub oak	3	4	Poor	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3188	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	7	3.16	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3189	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	9	3.87	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1
3190	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	8	4.69	3	2	2	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
3191	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3193	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Critical	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3194	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	6	8.77	4	2	4	4	3	4	Mesa Verde onsite	Removal	Protected	
3195	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	4.80	3	2	1	3	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3196	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	4.47	2	2	2	2	2	-	Mesa Verde onsite	Preserved/avoided	Protected	
3197	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3198	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Encroachment	Protected	
3199	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	6.16	1	1	6	-	-	-	Mesa Verde onsite	Encroachment	Protected	
3200	*Quercus berberidifolia*	Scrub oak	4	5	Dead	Dead	3	6.16	1	1	6	-	-	-	Mesa Verde onsite	Removal	Protected	
3201	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3202	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	4	6.24	1	1	1	6	-	-	Mesa Verde onsite	Removal	Protected	
3203	*Quercus berberidifolia*	Scrub oak	5	15	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3205	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3206	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3207	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	6.16	1	1	6	-	-	-	Mesa Verde onsite	Removal	Protected	
3208	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3209	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	6.16	1	1	6	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3210	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3211	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3212	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	6.24	1	1	1	6	-	-	Mesa Verde onsite	Removal	Protected	
3213	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	6.71	3	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3214	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	4	4.47	1	1	3	3	-	-	Mesa Verde onsite	Removal	Protected	
3215	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	4	3.46	1	1	1	3	-	-	Mesa Verde onsite	Removal	Protected	
3216	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	3.87	2	1	1	3	-	-	Mesa Verde onsite	Removal	Protected	
3218	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3219	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3221	*Quercus berberidifolia*	Scrub oak	10	20	Critical	Poor	8	3.74	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
3223	*Quercus berberidifolia*	Scrub oak	10	5	Dead	dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3224	*Quercus berberidifolia*	Scrub oak	10	10	Dead	dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3225	*Quercus berberidifolia*	Scrub oak	5	15	Dead	dead	5	5.66	3	3	3	2	1	-	Mesa Verde onsite	Removal	Protected	
3226	*Quercus berberidifolia*	Scrub oak	10	10	Dead	dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3227	*Quercus berberidifolia*	Scrub oak	5	5	Dead	dead	3	3.32	1	3	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3229	*Quercus berberidifolia*	Scrub oak	5	5	Dead	dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3230	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	2	4.24	3	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3232	*Quercus berberidifolia*	Scrub oak	10	20	Poor	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3233	*Quercus berberidifolia*	Scrub oak	15	20	Dead	Dead	6	6.78	3	1	3	3	3	3	Mesa Verde onsite	Removal	Protected	
3234	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3235	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	7.35	4	1	1	6	-	-	Mesa Verde onsite	Removal	Protected	
3236	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	7.21	4	6	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3237	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	4.12	4	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3238	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3239	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3240	*Quercus berberidifolia*	Scrub oak	5	1	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3241	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3242	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3243	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3244	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3245	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3246	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3247	*Quercus berberidifolia*	Scrub oak	3	10	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3248	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
3249	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3250	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3251	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3252	*Quercus berberidifolia*	Scrub oak	2	3	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3253	*Quercus berberidifolia*	Scrub oak	7	5	Fair	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3254	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	4.24	3	2	2	1	-	-	Mesa Verde onsite	Removal	Protected	
3255	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3256	*Quercus berberidifolia*	Scrub oak	5	2	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3257	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3258	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3259	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3260	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3261	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3262	*Quercus berberidifolia*	Scrub oak	5	15	Fair	Fair	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3263	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3264	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	7	3.16	2	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3265	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3266	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3267	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	3.00	1	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
3268	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	3.16	3	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3269	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3270	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3271	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3272	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3273	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3274	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3275	*Quercus berberidifolia*	Scrub oak	4	20	Dead	Dead	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
3277	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	5	3.61	3	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3278	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	3	4.12	2	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	
3279	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	3	3.00	2	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3280	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	6	5.29	3	3	2	2	1	1	Mesa Verde onsite	Removal	Protected	
3281	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	5.83	5	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3282	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	5	5.39	5	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3283	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	6	5.29	3	3	2	2	1	1	Mesa Verde onsite	Removal	Protected	
3284	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	3.61	2	3	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3285	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	5.39	4	3	2	-	-	-	Mesa Verde onsite	Removal	Protected	
3286	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	3.74	3	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3287	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	7	3.87	3	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3288	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3289	*Quercus berberidifolia*	Scrub oak	15	20	Dead	Dead	5	4.12	2	2	2	2	1	-	Mesa Verde onsite	Removal	Protected	
3290	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3291	*Quercus berberidifolia*	Scrub oak	5	3	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3292	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	3	3.32	1	1	3	-	-	-	Mesa Verde onsite	Removal	Protected	
3293	*Quercus berberidifolia*	Scrub oak	4	10	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3294	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	6	5.29	3	2	1	3	1	2	Mesa Verde onsite	Removal	Protected	
3295	*Quercus berberidifolia*	Scrub oak	10	20	Dead	dead	2	3.16	3	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3296	*Quercus berberidifolia*	Scrub oak	3	1	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3297	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3298	*Quercus berberidifolia*	Scrub oak	15	10	Dead	Dead	6	4.80	3	2	2	2	1	1	Mesa Verde onsite	Removal	Protected	
3299	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3300	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3301	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3302	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3303	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3305	*Quercus berberidifolia*	Scrub oak	15	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3306	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3307	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3310	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Encroachment	Protected	
3311	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Removal	Protected	
3312	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	5.00	4	1	2	2	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3314	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3315	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3316	*Quercus berberidifolia*	Scrub oak	4	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3317	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3318	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3319	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3320	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3321	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3322	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3323	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3324	*Quercus berberidifolia*	Scrub oak	3	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3325	*Quercus berberidifolia*	Scrub oak	3	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3326	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3327	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3328	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3329	*Quercus berberidifolia*	Scrub oak	2	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3330	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3331	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3332	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3333	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3334	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3335	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3336	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3337	*Quercus berberidifolia*	Scrub oak	3	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3338	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3339	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3340	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3341	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3342	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3343	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3344	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3345	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3346	*Quercus berberidifolia*	Scrub oak	5	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3347	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3348	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3349	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3350	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3351	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3352	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3353	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3354	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	3.46	2	2	2	-	-	-	Mesa Verde onsite	Removal	Protected	
3355	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3356	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3357	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	8	2.83	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1,1
3358	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3359	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3360	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3361	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3362	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3363	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3364	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3365	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3365	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
3366	*Quercus berberidifolia*	Scrub oak	5	4	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	
3366	*Quercus berberidifolia*	Scrub oak	5	4	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3367	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3368	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3369	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	1 dsh
3370	*Quercus berberidifolia*	Scrub oak	15	10	Dead	Dead	2	4.12	4	1	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
3371	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	1
3373	*Quercus berberidifolia*	Scrub oak	15	5	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	3
3374	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Preserved/avoided	Protected	
3375	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	5	5.48	3	3	2	2	2	-	Mesa Verde onsite	Preserved/avoided	Protected	
3376	*Quercus berberidifolia*	Scrub oak	4	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3377	*Quercus berberidifolia*	Scrub oak	6	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3378	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3379	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3380	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3381	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3382	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	4.00	2	2	2	2	-	-	Mesa Verde onsite	Removal	Protected	
3383	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3384	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3385	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3386	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3387	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3388	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3389	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3390	*Quercus berberidifolia*	Scrub oak	15	20	Dead	Dead	13	4.69	2	2	2	1	1	1	Mesa Verde onsite	Removal	Protected	1,1,1,1,1,1,1
3391	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3392	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3393	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	5	3.32	2	2	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3394	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3395	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Critical	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3396	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3397	*Quercus berberidifolia*	Scrub oak	5	5	Critical	Critical	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3398	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3399	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3400	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3401	*Quercus berberidifolia*	Scrub oak	5	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3402	*Quercus berberidifolia*	Scrub oak	5	4	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3403	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	3
3404	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	4	3.16	2	2	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3405	*Quercus berberidifolia*	Scrub oak	2	2	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	1
3406	*Quercus berberidifolia*	Scrub oak	5	15	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3407	*Quercus berberidifolia*	Scrub oak	3	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3408	*Quercus berberidifolia*	Scrub oak	3	5	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3409	*Quercus berberidifolia*	Scrub oak	5	10	Poor	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3410	*Quercus berberidifolia*	Scrub oak	3	10	Poor	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3411	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	10.25	5	5	5	5	2	1	Mesa Verde onsite	Removal	Protected	
3412	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3413	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3414	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3415	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3416	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3417	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	3.46	2	2	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3418	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3419	*Quercus berberidifolia*	Scrub oak	4	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3420	*Quercus berberidifolia*	Scrub oak	4	5	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3421	*Quercus berberidifolia*	Scrub oak	2	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3422	*Quercus berberidifolia*	Scrub oak	2	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3423	*Quercus berberidifolia*	Scrub oak	2	3	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3424	*Quercus berberidifolia*	Scrub oak	4	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3425	*Quercus berberidifolia*	Scrub oak	7	10	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3426	*Quercus berberidifolia*	Scrub oak	7	10	Dead	Dead	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3427	*Quercus berberidifolia*	Scrub oak	4	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3428	*Quercus berberidifolia*	Scrub oak	7	5	Dead	Dead	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3429	*Quercus berberidifolia*	Scrub oak	7	5	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3430	*Quercus berberidifolia*	Scrub oak	7	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3431	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3432	*Quercus berberidifolia*	Scrub oak	3	4	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3433	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Critical	2	2.24	2	1	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3434	*Quercus berberidifolia*	Scrub oak	5	5	Fair	fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3435	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3436	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3437	*Quercus berberidifolia*	Scrub oak	15	15	Dead	Dead	2	6.40	4	5	-	-	-	-	Mesa Verde onsite	Removal	Protected	
3438	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3439	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	2

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
3440	*Quercus berberidifolia*	Scrub oak	7	5	Dead	Dead	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	1
3441	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Critical	7	2.65	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	1
3442	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3443	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	4	2.65	2	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3444	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3445	*Quercus berberidifolia*	Scrub oak	5	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3446	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	3	5.48	5	2	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3447	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3448	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3449	*Quercus berberidifolia*	Scrub oak	4	3	Critical	Poor	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	1
3450	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3451	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	5	2.24	1	1	1	1	1	-	Mesa Verde onsite	Removal	Protected	
3452	*Quercus berberidifolia*	Scrub oak	5	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3453	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3454	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	3.00	3	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	3
3455	*Quercus berberidifolia*	Scrub oak	5	3	Fair	Fair	1	1.00	1	-	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	1
3456	*Quercus berberidifolia*	Scrub oak	10	15	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3457	*Quercus berberidifolia*	Scrub oak	7	10	Critical	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3458	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3459	*Quercus berberidifolia*	Scrub oak	10	5	Dead	Dead	2	1.41	1	1	-	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3460	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	6	4.90	2	2	2	2	2	2	Mesa Verde onsite	Removal	Protected	
3461	*Quercus berberidifolia*	Scrub oak	5	10	Critical	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde onsite	Removal	Protected	
3462	*Quercus berberidifolia*	Scrub oak	5	15	Dead	Dead	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3463	*Quercus berberidifolia*	Scrub oak	5	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3464	*Quercus berberidifolia*	Scrub oak	10	20	Dead	Dead	7	11.75	3	3	3	3	1	1	Mesa Verde onsite	Removal	Protected	10
3465	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	2.45	2	1	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3466	*Quercus berberidifolia*	Scrub oak	10	10	Critical	Critical	3	1.73	1	1	1	-	-	-	Mesa Verde onsite	Removal	Non-jurisdictional	
3467	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde onsite	Removal	Protected	
3468	*Quercus berberidifolia*	Scrub oak	3	15	Dead	Dead	3	3.74	2	3	1	-	-	-	Mesa Verde onsite	Removal	Protected	
3469	*Sambucus nigra*	Elderberry	15	25	Fair	Fair	12	12.96	5	3	5	2	6	6	Mesa Verde onsite	Encroachment	Non-jurisdictional	5,2,1,1,1,1
3470	*Sambucus nigra*	Elderberry	15	15	Fair	Fair	10	8.83	5	4	4	2	3	2	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	1,1,1,1
3471	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	9	14.35	6	7	4	10	1	1	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	1,1,1,
3472	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	7	11.31	2	4	3	3	4	5	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	7
3473	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	7	10.44	3	1	5	6	2	5	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	3
3474	*Sambucus nigra*	Elderberry	20	25	Fair	Fair	12	14.35	4	2	5	2	1	8	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	2,4,6,4,2,4
3475	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	10	7.75	3	3	3	3	2	2	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	2,2,2,2
3476	*Sambucus nigra*	Elderberry	20	20	Fair	Fair	13	14.49	5	3	2	4	4	3	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	3,2,4,6,8,1,1
3477	*Sambucus nigra*	Elderberry	15	20	Fair	Fair	10	8.00	4	4	4	2	2	2	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	1,1,1,1
3478	*Sambucus nigra*	Elderberry	20	25	Fair	Fair	8	14.76	10	7	5	4	3	3	Mesa Verde onsite	Preserved/avoided	Non-jurisdictional	3,1
3479	*Quercus agrifolia*	Coast live oak	40	45	Fair	Fair	2	16.97	12	12	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
4443	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	6.00	6	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	Fallen
4444	*Quercus agrifolia*	Coast live oak	0	0	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde onsite	Removal	Protected	Fallen
5000	*Populus fremontii*	Cottonwood	25	15	Fair	Fair	4	16.37	13	7	5	5	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
5001	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	7.21	6	4	-	-	-	-	Mesa Verde offsite	Removal	Protected	
5002	*Cedrus deodara*	Deodar cedar	30	25	Good	Fair	1	24.00	24	-	-	-	-	-	Outside of project boundary	Encroachment	Mature	No tag private property
5003	*Pinus pinea*	Italian stone pine	40	25	Fair	Fair	1	30.00	30	-	-	-	-	-	Outside of project boundary	Encroachment	Mature	No tag, private property
5004	*Schinus molle*	Peruvian pepper	35	25	Fair	Fair	1	24.00	24	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	No tag, private property
5005	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	4.47	2	2	2	2	2	-	Mesa Verde offsite	Removal	Protected	
5006	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	4.90	4	2	2	-	-	-	Mesa Verde offsite	Removal	Protected	
5007	*Quercus berberidifolia*	Scrub oak	10	6	Poor	Fair	3	5.39	4	3	2	-	-	-	Mesa Verde offsite	Removal	Protected	
5008	*Quercus berberidifolia*	Scrub oak	6	10	Fair	Fair	5	7.00	4	4	3	2	2	-	Mesa Verde offsite	Removal	Protected	
5009	*Quercus berberidifolia*	Scrub oak	7	8	Fair	Fair	5	5.00	3	2	2	2	2	-	Mesa Verde offsite	Removal	Protected	
8879	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	2	10.44	10	3	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
10000	*Quercus agrifolia*	Coast live oak	40	40	Fair	Poor	4	38.79	24	22	18	11	-	-	Mesa Verde onsite	Preserved/avoided	Heritage	
10001	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10002	*Quercus agrifolia*	Coast live oak	20	25	Poor	Poor	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10003	*Quercus agrifolia*	Coast live oak	35	30	Fair	Poor	1	13.00	13	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10004	*Quercus agrifolia*	Coast live oak	15	10	Poor	Fair	1	3.00	3	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10005	*Quercus agrifolia*	Coast live oak	10	8	Critical	Poor	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
10006	*Quercus agrifolia*	Coast live oak	20	20	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10007	*Quercus agrifolia*	Coast live oak	15	8	Critical	Critical	1	3.00	3	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10008	*Quercus agrifolia*	Coast live oak	10	10	Fair	Poor	4	2.00	1	1	1	1	-	-	Outside of project boundary	Preserved/avoided	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10009	*Quercus agrifolia*	Coast live oak	20	30	Poor	Critical	1	12.00	12	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10010	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10011	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	1	20.00	20	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10012	*Quercus agrifolia*	Coast live oak	50	30	Fair	Fair	1	23.00	23	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10013	*Quercus agrifolia*	Coast live oak	40	25	Poor	Poor	1	13.00	13	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10014	*Quercus agrifolia*	Coast live oak	15	20	Critical	Critical	3	4.12	3	2	2	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
10015	*Quercus agrifolia*	Coast live oak	40	15	Fair	Fair	1	10.00	10	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10016	*Quercus agrifolia*	Coast live oak	40	25	Fair	Fair	1	15.00	15	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10017	*Quercus agrifolia*	Coast live oak	15	10	Critical	Fair	3	3.32	3	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10018	*Quercus agrifolia*	Coast live oak	50	30	Fair	Fair	1	30.00	30	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10019	*Quercus agrifolia*	Coast live oak	45	25	Poor	Fair	1	15.00	15	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10020	*Quercus agrifolia*	Coast live oak	5	8	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde onsite	Preserved/avoided	Protected	
10021	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10022	*Quercus agrifolia*	Coast live oak	20	30	Fair	Poor	2	15.62	12	10	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10023	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	1	18.00	18	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10023	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	1	18.00	18	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10024	*Quercus agrifolia*	Coast live oak	40	25	Fair	Fair	2	15.00	12	9	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10026	*Quercus agrifolia*	Coast live oak	25	20	Fair	Poor	1	9.00	9	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10027	*Quercus berberidifolia*	Scrub oak	30	25	Fair	Poor	3	11.49	10	4	4	-	-	-	Mesa Verde offsite	Removal	Protected	
10028	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	2	8.60	7	5	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10029	*Quercus agrifolia*	Coast live oak	50	40	Fair	Poor	1	27.00	27	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	
10030	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Critical	2	5.10	5	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10031	*Quercus berberidifolia*	Scrub oak	20	8	Critical	Poor	1	4.00	4	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10032	*Quercus agrifolia*	Coast live oak	8	8	Fair	Fair	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
10033	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	5	2.24	1	1	1	1	1	-	Outside of project boundary	Preserved/avoided	Protected	
10034	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	3	3.32	3	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10035	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10036	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	6	7.35	7	1	1	1	1	1	Outside of project boundary	Preserved/avoided	Protected	
10037	*Quercus agrifolia*	Coast live oak	15	20	Dead	Dead	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10038	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	1	23.00	23	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10039	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	20.00	20	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10040	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	2	9.22	7	6	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10041	*Quercus berberidifolia*	Scrub oak	30	20	Fair	Fair	3	12.81	8	8	6	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10042	*Quercus berberidifolia*	Scrub oak	0	0	Poor	Poor	3	6.71	5	4	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Stumps
10043	*Quercus agrifolia*	Coast live oak	15	25	Fair	Poor	1	10.00	10	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10044	*Quercus agrifolia*	Coast live oak	50	30	Fair	Fair	1	25.00	25	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10045	*Quercus agrifolia*	Coast live oak	45	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10046	*Quercus agrifolia*	Coast live oak	45	25	Fair	Fair	2	15.00	12	9	-	-	-	-	Outside of project boundary	Encroachment	Heritage	
10047	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10048	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	3	10.49	7	6	5	-	-	-	Outside of project boundary	Encroachment	Protected	
10049	*Quercus agrifolia*	Coast live oak	30	20	Poor	Fair	3	12.12	7	7	7	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10050	*Quercus berberidifolia*	Scrub oak	30	15	Poor	Fair	2	6.32	6	2	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10051	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	2	6.40	5	4	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10052	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Fair	3	2.45	2	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10053	*Quercus agrifolia*	Coast live oak	10	6	Fair	Fair	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
10054	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Poor	2	2.24	2	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10055	*Quercus berberidifolia*	Scrub oak	10	5	Poor	Fair	4	2.00	1	1	1	1	-	-	Outside of project boundary	Preserved/avoided	Protected	
10056	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	3	6.16	6	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10057	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	2	3.61	3	2	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10058	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10059	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Poor	2	7.21	6	4	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10060	*Quercus berberidifolia*	Scrub oak	20	10	Poor	Poor	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10061	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10062	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	2	7.07	5	5	-	-	-	-	Outside of project boundary	Encroachment	Protected	
10063	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Poor	3	7.87	7	3	2	-	-	-	Mesa Verde offsite	Removal	Protected	
10064	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	3	11.09	7	7	5	-	-	-	Mesa Verde offsite	Removal	Protected	
10065	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
10067	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	
10068	*Quercus berberidifolia*	Scrub oak	15	8	Critical	Critical	3	1.73	1	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	
10068	*Quercus berberidifolia*	Scrub oak	15	8	Critical	Critical	3	1.73	1	1	1	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10069	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	5	4.47	4	1	1	1	1	-	Outside of project boundary	Preserved/avoided	Protected	
10070	*Quercus agrifolia*	Coast live oak	40	25	Critical	Poor	1	15.00	15	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10071	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	10.00	10	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	
10072	*Quercus berberidifolia*	Scrub oak	15	15	Poor	Fair	2	5.00	4	3	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10073	*Quercus agrifolia*	Coast live oak	15	15	Poor	Poor	1	13.00	13	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10074	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10075	*Quercus berberidifolia*	Scrub oak	8	8	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde offsite	Removal	Protected	
10076	*Quercus berberidifolia*	Scrub oak	10	20	Fair	Poor	4	6.08	5	2	2	2	-	-	Mesa Verde offsite	Removal	Protected	
10077	*Quercus berberidifolia*	Scrub oak	8	8	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10078	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	4	9.06	5	5	4	4	-	-	Mesa Verde offsite	Removal	Protected	
10079	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	4	12.25	8	6	5	5	-	-	Mesa Verde offsite	Removal	Heritage	
10080	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10081	*Quercus agrifolia*	Coast live oak	40	25	Fair	Poor	1	10.00	10	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10082	*Quercus agrifolia*	Coast live oak	30	10	Poor	Poor	2	12.04	12	1	-	-	-	-	Mesa Verde offsite	Removal	Heritage	Large limb dead and fallen
10083	*Quercus agrifolia*	Coast live oak	4	3	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10084	*Quercus agrifolia*	Coast live oak	20	8	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10085	*Quercus agrifolia*	Coast live oak	30	20	Fair	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10086	*Quercus agrifolia*	Coast live oak	20	15	Poor	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10087	*Quercus agrifolia*	Coast live oak	50	30	Fair	Fair	1	20.00	20	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10088	*Quercus agrifolia*	Coast live oak	25	20	Fair	Poor	1	10.00	10	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10089	*Quercus agrifolia*	Coast live oak	30	20	Poor	Poor	1	9.00	9	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10090	*Quercus agrifolia*	Coast live oak	25	20	Fair	Poor	1	12.00	12	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10091	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10092	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10093	*Quercus berberidifolia*	Scrub oak	20	30	Fair	Fair	2	12.21	10	7	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10094	*Quercus agrifolia*	Coast live oak	50	30	Poor	Critical	2	26.91	20	18	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10095	*Quercus berberidifolia*	Scrub oak	10	6	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10096	*Quercus berberidifolia*	Scrub oak	30	15	Poor	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10097	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Poor	2	2.24	2	1	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10098	*Quercus berberidifolia*	Scrub oak	30	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10099	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	4	5.57	5	2	1	1	-	-	Mesa Verde offsite	Removal	Protected	
10100	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Critical	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10101	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10102	*Quercus berberidifolia*	Scrub oak	8	12	Poor	Poor	6	5.74	5	2	1	1	1	1	Mesa Verde offsite	Removal	Protected	
10103	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	6	7.35	7	1	1	1	1	1	Mesa Verde offsite	Removal	Protected	
10104	*Quercus agrifolia*	Coast live oak	10	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10105	*Quercus berberidifolia*	Scrub oak	20	15	Poor	Poor	4	8.54	5	4	4	4	-	-	Mesa Verde offsite	Removal	Protected	
10106	*Quercus berberidifolia*	Scrub oak	12	8	Fair	Fair	2	2.24	1	2	-	-	-	-	Mesa Verde offsite	Removal	Protected	Tag on shrub north of scrub oak
10107	*Quercus agrifolia*	Coast live oak	30	10	Dead	Dead	1	18.00	18	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	Dead and fallen
10108	*Quercus agrifolia*	Coast live oak	30	12	Dead	Dead	1	13.00	13	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10109	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Poor	5	10.77	5	5	5	5	4	-	Mesa Verde offsite	Removal	Protected	
10110	*Quercus agrifolia*	Coast live oak	12	12	Dead	Dead	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10111	*Quercus agrifolia*	Coast live oak	30	25	Fair	Poor	1	14.00	14	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10112	*Quercus agrifolia*	Coast live oak	25	25	Fair	Poor	1	16.00	16	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10113	*Quercus agrifolia*	Coast live oak	50	40	Fair	Fair	3	33.75	25	17	15	-	-	-	Mesa Verde offsite	Removal	Heritage	
10114	*Quercus agrifolia*	Coast live oak	40	30	Fair	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10115	*Quercus berberidifolia*	Scrub oak	10	15	Critical	Poor	2	8.60	7	5	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10116	*Quercus berberidifolia*	Scrub oak	8	15	Dead	Dead	3	8.37	6	5	3	-	-	-	Mesa Verde offsite	Removal	Protected	
10117	*Quercus agrifolia*	Coast live oak	50	25	Fair	Poor	1	21.00	21	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10118	*Quercus agrifolia*	Coast live oak	15	25	Fair	Poor	1	16.00	16	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10119	*Quercus agrifolia*	Coast live oak	40	20	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10120	*Quercus agrifolia*	Coast live oak	40	25	Fair	Fair	1	17.00	17	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10121	*Quercus berberidifolia*	Scrub oak	12	15	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10122	*Quercus berberidifolia*	Scrub oak	6	8	Dead	Dead	2	2.83	2	2	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10123	*Quercus berberidifolia*	Scrub oak	6	10	Dead	Dead	2	5.66	4	4	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10124	*Quercus berberidifolia*	Scrub oak	5	8	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10125	*Quercus berberidifolia*	Scrub oak	15	6	Poor	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10126	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Fair	3	7.48	6	4	2	-	-	-	Mesa Verde offsite	Removal	Protected	
10127	*Quercus berberidifolia*	Scrub oak	15	8	Poor	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10128	*Quercus berberidifolia*	Scrub oak	6	15	Poor	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10129	*Quercus berberidifolia*	Scrub oak	30	25	Poor	Fair	2	11.40	9	7	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10130	*Quercus berberidifolia*	Scrub oak	4	10	Dead	Dead	2	5.39	5	2	-	-	-	-	Mesa Verde offsite	Removal	Protected	Dead and fallen
10131	*Quercus berberidifolia*	Scrub oak	20	8	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10132	*Quercus berberidifolia*	Scrub oak	8	0	Dead	Dead	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10133	*Quercus berberidifolia*	Scrub oak	20	25	Poor	Fair	4	14.21	9	7	6	6	-	-	Mesa Verde offsite	Removal	Heritage	
10134	*Quercus berberidifolia*	Scrub oak	30	20	Fair	Poor	1	8.00	8	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10135	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10136	*Quercus berberidifolia*	Scrub oak	8	15	Fair	Poor	3	6.93	4	4	4	-	-	-	Mesa Verde offsite	Removal	Protected	
10137	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10138	*Quercus berberidifolia*	Scrub oak	20	15	Poor	Poor	3	7.81	6	4	3	-	-	-	Mesa Verde offsite	Removal	Protected	
10139	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	2	6.08	6	1	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10140	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Fair	10	7.14	6	2	2	1	1	1	Mesa Verde offsite	Removal	Protected	1,1,1,1
10141	*Quercus agrifolia*	Coast live oak	8	4	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10142	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10143	*Quercus berberidifolia*	Scrub oak	30	25	Fair	Fair	1	10.00	10	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10144	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Critical	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10145	*Quercus agrifolia*	Coast live oak	30	10	Dead	Dead	1	11.00	11	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10146	*Quercus agrifolia*	Coast live oak	15	20	Fair	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10147	*Quercus berberidifolia*	Scrub oak	20	10	Poor	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10148	*Quercus berberidifolia*	Scrub oak	25	20	Poor	Poor	2	9.22	7	6	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10149	*Quercus berberidifolia*	Scrub oak	30	25	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10150	*Quercus agrifolia*	Coast live oak	40	20	Fair	Fair	1	12.00	12	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10151	*Quercus berberidifolia*	Scrub oak	35	20	Fair	Fair	3	9.27	6	5	5	-	-	-	Mesa Verde offsite	Removal	Protected	
10152	*Quercus berberidifolia*	Scrub oak	25	25	Poor	Critical	8	2.83	1	1	1	1	1	1	Mesa Verde offsite	Removal	Protected	
10153	*Quercus berberidifolia*	Scrub oak	10	8	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10154	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10155	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	4	2.00	1	1	1	1	-	-	Mesa Verde offsite	Removal	Protected	No tag, estimated data, poison oak
10156	*Quercus berberidifolia*	Scrub oak	30	25	Poor	Fair	3	12.88	9	7	6	-	-	-	Mesa Verde offsite	Removal	Heritage	
10157	*Quercus berberidifolia*	Scrub oak	30	20	Fair	Fair	2	9.22	7	6	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10158	*Quercus berberidifolia*	Scrub oak	25	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10159	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Poor	3	9.27	6	5	5	-	-	-	Mesa Verde offsite	Removal	Protected	
10160	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10161	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Poor	2	7.81	6	5	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10162	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10163	*Quercus berberidifolia*	Scrub oak	10	5	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10164	*Quercus berberidifolia*	Scrub oak	15	8	Fair	Poor	2	3.61	3	2	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10165	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10166	*Quercus berberidifolia*	Scrub oak	15	10	Critical	Poor	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10167	*Quercus berberidifolia*	Scrub oak	12	8	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10168	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10169	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	4	11.70	7	6	6	4	-	-	Mesa Verde offsite	Removal	Protected	
10170	*Quercus berberidifolia*	Scrub oak	25	15	Poor	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10171	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	3	1.73	1	1	1	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10172	*Quercus berberidifolia*	Scrub oak	25	20	Fair	Poor	2	10.30	9	5	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10173	*Quercus berberidifolia*	Scrub oak	5	25	Fair	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10174	*Quercus agrifolia*	Coast live oak	30	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10175	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10176	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	2	14.42	12	8	-	-	-	-	Mesa Verde offsite	Removal	Heritage	
10177	*Quercus agrifolia*	Coast live oak	15	5	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10178	*Quercus agrifolia*	Coast live oak	15	5	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10179	*Quercus agrifolia*	Coast live oak	25	10	Fair	Poor	6	5.39	4	3	1	1	1	1	Mesa Verde offsite	Removal	Protected	
10179	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	2	6.71	6	3	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10181	*Quercus agrifolia*	Coast live oak	6	8	Fair	Poor	2	1.41	1	1	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10182	*Quercus agrifolia*	Coast live oak	8	10	Fair	Poor	3	1.73	1	1	1	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10183	*Quercus agrifolia*	Coast live oak	15	10	Fair	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10184	*Quercus agrifolia*	Coast live oak	10	10	Fair	Poor	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10185	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	3	11.09	7	7	5	-	-	-	Mesa Verde offsite	Removal	Protected	
10186	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10187	*Quercus agrifolia*	Coast live oak	25	8	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10188	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10190	*Quercus agrifolia*	Coast live oak	30	20	Fair	Poor	4	11.40	7	7	4	4	-	-	Mesa Verde offsite	Removal	Protected	
10191	*Quercus agrifolia*	Coast live oak	25	8	Fair	Good	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10192	*Quercus berberidifolia*	Scrub oak	7	12	Poor	Critical	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10193	*Quercus berberidifolia*	Scrub oak	15	8	Fair	Poor	3	4.24	4	1	1	-	-	-	Mesa Verde offsite	Removal	Protected	
10194	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Poor	6	4.90	2	2	2	2	2	2	Mesa Verde offsite	Removal	Protected	
10195	*Quercus berberidifolia*	Scrub oak	6	10	Dead	Dead	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	

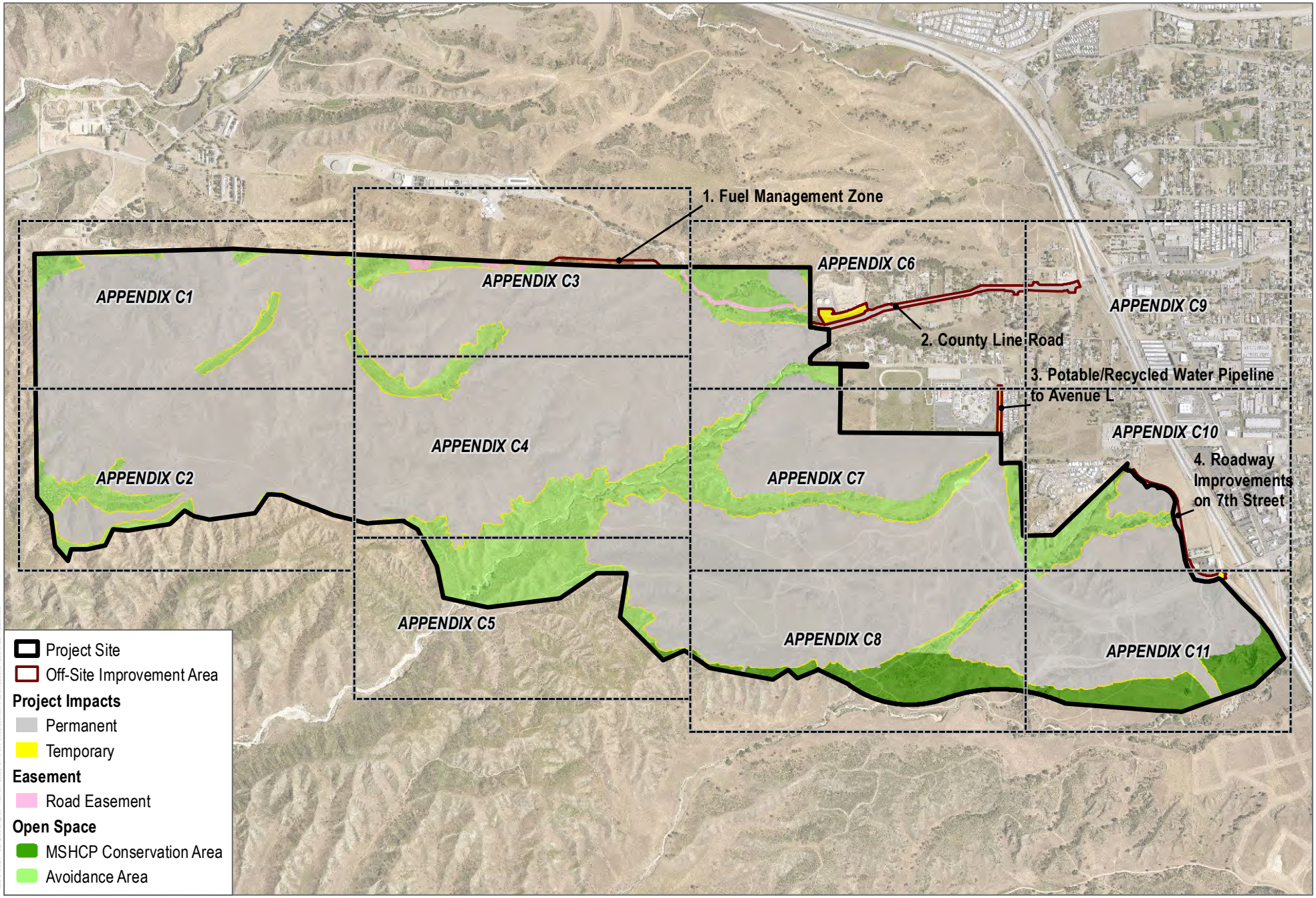
Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10196	*Quercus berberidifolia*	Scrub oak	8	15	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10197	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	6	8.25	6	5	2	1	1	1	Mesa Verde offsite	Removal	Protected	
10198	*Quercus berberidifolia*	Scrub oak	30	20	Fair	Poor	2	9.90	7	7	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10199	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10200	*Quercus agrifolia*	Coast live oak	20	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10201	*Quercus berberidifolia*	Scrub oak	15	20	Fair	Poor	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10202	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	1	9.00	9	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10203	*Quercus berberidifolia*	Scrub oak	25	10	Fair	Fair	2	8.06	7	4	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10204	*Quercus berberidifolia*	Scrub oak	20	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10205	*Quercus berberidifolia*	Scrub oak	20	8	Poor	Fair	1	4.00	4	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10206	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	2	2.24	2	1	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10207	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10208	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	3	5.74	5	2	2	-	-	-	Mesa Verde offsite	Removal	Protected	
10209	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	2	1.41	1	1	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10210	*Quercus berberidifolia*	Scrub oak	30	12	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10211	*Quercus berberidifolia*	Scrub oak	25	15	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10212	*Quercus agrifolia*	Coast live oak	10	6	Fair	Fair	1	2.00	2	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10213	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	2	11.40	9	7	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10214	*Quercus berberidifolia*	Scrub oak	10	15	Poor	Poor	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10215	*Quercus agrifolia*	Coast live oak	20	8	Fair	Fair	2	3.16	3	1	-	-	-	-	Mesa Verde offsite	Removal	Protected	
10216	*Quercus berberidifolia*	Scrub oak	25	20	Fair	Poor	3	10.20	8	6	2	-	-	-	Mesa Verde offsite	Removal	Protected	
10217	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Fair	6	9.75	5	5	4	4	3	2	Mesa Verde offsite	Removal	Protected	
10218	*Fraxinus dipetala*	California ash	30	20	Fair	Fair	4	18.63	11	9	9	8	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10219	*Fraxinus dipetala*	California ash	20	15	Fair	Poor	4	17.03	9	9	8	8	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	
10220	*Pistacia chinensis*	Chinese pistache	15	15	Fair	Poor	14	15.20	7	5	5	5	5	4	Mesa Verde offsite	Removal	Non-jurisdictional	4,4,3,3,2,2,2,2
10223	*Quercus berberidifolia*	Scrub oak	5	15	Dead	Dead	2	11.31	8	8	-	-	-	-	Mesa Verde onsite	Encroachment	Protected	Estimated data no tag access issue
10224	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Poor	5	2.83	2	1	1	1	1	-	Mesa Verde onsite	Encroachment	Protected	Estimated data, no tag
10225	*Quercus agrifolia*	Coast live oak	10	20	Fair	Poor	3	9.95	7	5	5	-	-	-	Mesa Verde onsite	Encroachment	Protected	
10226	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Critical	4	5.10	3	3	2	2	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10227	*Quercus agrifolia*	Coast live oak	15	10	Critical	Poor	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10228	*Robinia pseudoacacia*	Black locust	50	30	Fair	Fair	5	20.57	13	12	7	6	5	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data no tag. Steep
10229	*Quercus berberidifolia*	Scrub oak	20	10	Poor	Poor	3	9.95	7	5	5	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10230	*Quercus agrifolia*	Coast live oak	25	25	Poor	Poor	2	34.66	25	24	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property/access issue
10231	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Fair	4	4.58	3	2	2	2	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10232	*Quercus agrifolia*	Coast live oak	25	15	Dead	Dead	1	33.00	33	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property/access issue
10233	*Quercus berberidifolia*	Scrub oak	10	10	Poor	Fair	4	4.58	3	2	2	2	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10234	*Quercus berberidifolia*	Scrub oak	20	20	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property/access issue
10235	*Quercus berberidifolia*	Scrub oak	15	5	Poor	Poor	3	6.16	5	3	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10236	*Quercus agrifolia*	Coast live oak	30	30	Poor	Poor	1	35.00	35	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property/access issue
10237	*Quercus berberidifolia*	Scrub oak	8	5	Fair	Poor	5	4.12	2	2	2	2	1	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10238	*Quercus agrifolia*	Coast live oak	35	25	Poor	Poor	1	27.00	27	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property/access issue
10239	*Quercus agrifolia*	Coast live oak	20	10	Dead	Dead	1	12.00	12	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data, no tag, private property
10240	*Quercus agrifolia*	Coast live oak	20	15	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10241	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Poor	5	6.08	4	3	2	2	2	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10242	*Quercus agrifolia*	Coast live oak	7	10	Fair	Critical	1	4.00	4	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10243	*Quercus agrifolia*	Coast live oak	15	0	Dead	Dead	1	14.00	14	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data, no tag, private property. Dead and fallen
10244	*Quercus agrifolia*	Coast live oak	20	10	Poor	Poor	1	8.00	8	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10245	*Quercus berberidifolia*	Scrub oak	15	10	Critical	Poor	6	3.46	2	2	1	1	1	1	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10246	*Quercus agrifolia*	Coast live oak	30	15	Fair	Poor	1	12.00	12	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	
10247	*Quercus berberidifolia*	Scrub oak	15	10	Critical	Critical	3	7.81	6	4	3	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10248	*Quercus berberidifolia*	Scrub oak	15	20	Poor	Poor	6	14.83	7	7	6	6	5	5	Outside of project boundary	Preserved/avoided	Heritage	
10249	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10250	*Fraxinus dipetala*	California ash	30	30	Fair	Fair	3	14.07	10	7	7	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data no tag. Steep
10251	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10252	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	2	14.42	12	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property/access issue
10253	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10254	*Quercus berberidifolia*	Scrub oak	15	25	Fair	Fair	2	9.90	7	7	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property/access issue
10255	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10256	*Quercus berberidifolia*	Scrub oak	5	10	Dead	Dead	3	6.93	4	4	4	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property/access issue
10257	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10258	*Quercus berberidifolia*	Scrub oak	20	25	Fair	Fair	5	11.66	6	5	5	5	5	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property/access issue
10259	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property

Appendix B- Tree Information Matrix																		
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10260	*Quercus agrifolia*	Coast live oak	10	6	Fair	Fair	1	3.00	3	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	
10261	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10262	*Quercus agrifolia*	Coast live oak	40	45	Good	Fair	1	34.00	34	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10263	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10264	*Quercus agrifolia*	Coast live oak	40	25	Good	Fair	1	19.00	19	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10265	*Quercus agrifolia*	Coast live oak	25	10	Fair	Fair	2	11.31	8	8	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Rough estimated data, low visibility, no tag, private property
10266	*Quercus agrifolia*	Coast live oak	50	45	Poor	Poor	1	24.00	24	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10267	*Quercus agrifolia*	Coast live oak	35	25	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	Estimated data, no tag, private property
10268	*Quercus agrifolia*	Coast live oak	50	45	Good	Fair	1	24.00	24	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10269	*Quercus agrifolia*	Coast live oak	15	5	Dead	Dead	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10270	*Quercus agrifolia*	Coast live oak	50	45	Good	Fair	1	22.00	22	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10271	*Quercus agrifolia*	Coast live oak	10	15	Fair	Poor	1	5.00	5	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10272	*Quercus agrifolia*	Coast live oak	25	25	Good	Fair	1	17.00	17	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	Estimated data no tag. Private property
10273	*Olea europaea*	Olive	15	10	Poor	Poor	6	13.75	7	7	5	5	5	4	Mesa Verde offsite	Removal	Non-jurisdictional	Estimated data, no tag, private property
10274	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	3	3.46	2	2	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10275	*Fraxinus dipetala*	California ash	45	30	Fair	Poor	5	21.45	14	10	8	8	6	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10276	*Quercus agrifolia*	Coast live oak	15	15	Fair	Fair	5	5.48	3	3	2	2	2	-	Mesa Verde offsite	Removal	Protected	Estimated data no tag. Private property
10277	*Quercus agrifolia*	Coast live oak	20	10	Fair	Poor	3	8.77	6	5	4	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10278	*Quercus agrifolia*	Coast live oak	30	40	Good	Fair	1	32.00	32	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data no tag. Private property
10279	*Melia azedarach*	Chinaberry	40	30	Fair	Fair	3	18.03	12	10	9	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10280	*Schinus molle*	Peruvian pepper	30	40	Good	Fair	1	29.00	29	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag. Private property
10281	*Quercus agrifolia*	Coast live oak	10	7	Fair	Poor	6	2.45	1	1	1	1	1	1	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10282	*Cedrus deodara*	Deodar cedar	45	40	Good	Good	1	26.00	26	-	-	-	-	-	Outside of project boundary	Encroachment	Mature	No tag private property
10283	*Quercus agrifolia*	Coast live oak	10	7	Fair	Poor	4	2.00	1	1	1	1	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10284	*Cedrus deodara*	Deodar cedar	45	30	Fair	Fair	1	26.00	26	-	-	-	-	-	Outside of project boundary	Encroachment	Mature	No tag private property
10285	*Melia azedarach*	Chinaberry	40	30	Fair	Fair	2	21.93	16	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10286	*Carya spp.*	Hickory	40	40	Fair	Fair	1	38.00	38	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	No tag private property
10287	*Melia azedarach*	Chinaberry	35	20	Fair	Fair	1	25.00	25	-	-	-	-	-	Mesa Verde offsite	Removal	Mature	Estimated data, no tag, private property
10288	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10289	*Melia azedarach*	Chinaberry	30	20	Fair	Fair	2	18.03	15	10	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10290	*Quercus agrifolia*	Coast live oak	25	25	Good	Fair	2	22.47	19	12	-	-	-	-	Outside of project boundary	Encroachment	Heritage	Tag S
10291	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10292	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	3	4.90	4	2	2	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10292	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10292	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	3	4.90	4	2	2	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10293	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	6.32	6	2	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10294	*Quercus agrifolia*	Coast live oak	10	7	Fair	Fair	1	2.00	2	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10295	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10296	*Pistacia chinensis*	Chinese pistache	20	20	Fair	Fair	6	12.65	7	6	5	5	4	3	Outside of project boundary	Encroachment	Non-jurisdictional	No tag private property
10297	*Quercus agrifolia*	Coast live oak	15	8	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10298	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	3.00	3	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	No tag private property
10299	*Quercus agrifolia*	Coast live oak	15	10	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10300	*Quercus agrifolia*	Coast live oak	25	25	Good	Fair	1	21.00	21	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	Tag S
10301	*Quercus agrifolia*	Coast live oak	15	6	Fair	Fair	3	4.90	4	2	2	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10302	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	1	2.00	2	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	Estimated data no tag private property
10303	*Fraxinus uhdei*	Shamel ash	40	25	Fair	Poor	1	26.00	26	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data, no tag, private property
10304	*Quercus agrifolia*	Coast live oak	10	10	Fair	Fair	2	2.83	2	2	-	-	-	-	Outside of project boundary	Encroachment	Protected	no tag private property
10305	*Fraxinus uhdei*	Shamel ash	40	25	Fair	Poor	2	17.69	13	12	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data, no tag, private property
10306	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Encroachment	Mature	Estimated data no tag private property
10307	*Quercus agrifolia*	Coast live oak	40	20	Fair	Fair	1	15.00	15	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data, no tag, private property
10308	*Quercus agrifolia*	Coast live oak	10	10	Good	Fair	3	2.45	2	1	1	-	-	-	Outside of project boundary	Encroachment	Protected	no tag private property
10309	*Melia azedarach*	Chinaberry	35	20	Fair	Poor	5	21.12	15	10	7	6	6	-	Mesa Verde offsite	Removal	Non-jurisdictional	Estimated data, no tag, private property
10310	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10311	*Fraxinus dipetala*	California ash	40	15	Fair	Poor	2	20.12	18	9	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	Estimated data, no tag, private property
10312	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10313	*Quercus agrifolia*	Coast live oak	25	15	Fair	Fair	1	14.00	14	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Heritage	Estimated data, no tag, private property
10314	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10315	*Quercus agrifolia*	Coast live oak	25	20	Fair	Fair	1	10.00	10	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10316	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10316	*Pinus halepensis*	Aleppo pine	25	30	Good	Fair	2	28.30	24	15	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10317	*Eucalyptus globulus*	Blue gum	75	40	Fair	Fair	6	39.47	20	16	16	15	15	14	Outside of project boundary	Preserved/avoided	Mature	Estimated data, no tag, private property
10318	*Ligustrum lucidum*	Glossy privet	15	15	Good	Fair	8	8.49	3	3	3	3	3	3	Outside of project boundary	Encroachment	Non-jurisdictional	Estimated data no tag private property. All 3

Appendix B- Tree Information Matrix																	
Tree No.	Scientific Name	Common Name	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Stems	Sum Square DSH (in.)	Individual Stems (in.)						Project Location	Impact	Protection Status	Tree Notes
									D1	D2	D3	D4	D5	D6				
10319	*Fraxinus dipetala*	California ash	30	15	Fair	Poor	3	15.13	12	7	6	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	Estimated data, no tag, private property
10320	*Pinus halepensis*	Aleppo pine	60	45	Good	Fair	1	28.00	28	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Mature	Estimated data no tag private property
10321	*Quercus agrifolia*	Coast live oak	30	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10322	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	6.40	5	4	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10323	*Schinus molle*	Peruvian pepper	55	30	Fair	Fair	2	21.93	16	15	-	-	-	-	Mesa Verde offsite	Removal	Non-jurisdictional	Estimated data, no tag, private property
10324	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	3.16	3	1	-	-	-	-	Outside of project boundary	Encroachment	Protected	Estimated data no tag private property
10324	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	3.16	3	1	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10325	*Quercus agrifolia*	Coast live oak	35	20	Fair	Poor	1	15.00	15	-	-	-	-	-	Outside of project boundary	Encroachment	Heritage	Estimated data, no tag, private property
10326	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	no tag private property
10327	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	10.00	10	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10328	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	4	4.58	3	2	2	2	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10329	*Quercus berberidifolia*	Scrub oak	20	15	Fair	Fair	4	9.75	6	5	5	3	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10330	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10331	*Quercus agrifolia*	Coast live oak	30	15	Fair	Fair	1	8.00	8	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10332	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10333	*Quercus berberidifolia*	Scrub oak	15	15	Fair	Poor	4	9.75	6	5	5	3	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10334	*Quercus berberidifolia*	Scrub oak	10	10	Dead	Dead	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10335	*Quercus berberidifolia*	Scrub oak	15	10	Fair	Fair	1	6.00	6	-	-	-	-	-	Mesa Verde offsite	Removal	Protected	Estimated data, no tag, private property
10336	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	3	7.00	6	3	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10337	*Quercus agrifolia*	Coast live oak	20	8	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10338	*Quercus berberidifolia*	Scrub oak	10	10	Fair	Fair	1	4.00	4	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10339	*Quercus berberidifolia*	Scrub oak	20	8	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	Estimated data, no tag, private property
10340	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.21	6	4	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10341	*Quercus agrifolia*	Coast live oak	30	20	Fair	Fair	1	16.00	16	-	-	-	-	-	Mesa Verde offsite	Removal	Heritage	Estimated data, no tag, private property
10342	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	3	10.39	6	6	6	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag private property
10343	*Quercus berberidifolia*	Scrub oak	15	8	Poor	Poor	1	6.00	6	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	Estimated data, no tag, private property
10344	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10345	*Quercus berberidifolia*	Scrub oak	15	8	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10346	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10347	*Quercus berberidifolia*	Scrub oak	25	10	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10348	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10349	*Quercus berberidifolia*	Scrub oak	10	6	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10350	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10351	*Quercus berberidifolia*	Scrub oak	10	6	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10352	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10353	*Quercus berberidifolia*	Scrub oak	8	6	Poor	Poor	3	3.46	2	2	2	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10354	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10355	*Quercus berberidifolia*	Scrub oak	15	8	Poor	Poor	1	6.00	6	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10356	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10357	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Poor	3	8.25	6	4	4	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10358	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10359	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10359	*Quercus berberidifolia*	Scrub oak	15	10	Poor	Poor	1	5.00	5	-	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data, no tag, private property
10360	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10361	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10362	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10363	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10364	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10365	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10366	*Quercus berberidifolia*	Scrub oak	20	12	Fair	Fair	1	7.00	7	-	-	-	-	-	Outside of project boundary	Encroachment	Protected	Estimated data, no tag, private property
10367	*Quercus berberidifolia*	Scrub oak	10	15	Fair	Fair	2	7.07	5	5	-	-	-	-	Outside of project boundary	Preserved/avoided	Protected	Estimated data no tag. Private property
10368	*Ligustrum lucidum*	Glossy privet	15	15	Fair	Fair	8	10.39	5	4	4	3	3	4	Mesa Verde offsite	Removal	Non-jurisdictional	No tag private property. 4, 1
10369	*Schinus molle*	Peruvian pepper	25	30	Fair	Fair	2	21.26	14	16	-	-	-	-	Outside of project boundary	Preserved/avoided	Non-jurisdictional	Estimated data no tag. Private property

Appendix C

Tree Impact Exhibit



SOURCE: Hunsaker 2024; Riverside County; Open Street Map

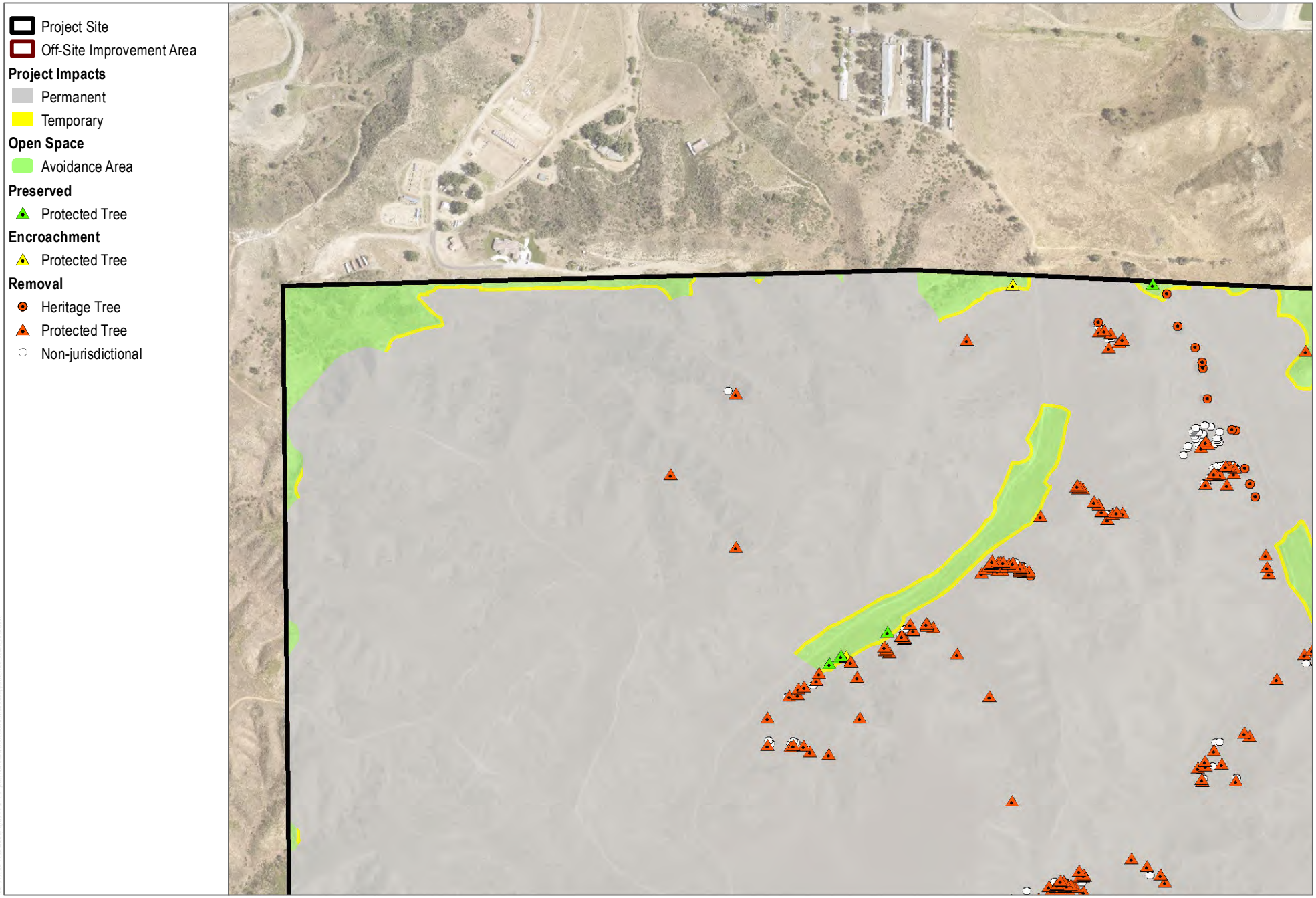
DUDEK

0 1,000 2,000 Feet

APPENDIX C

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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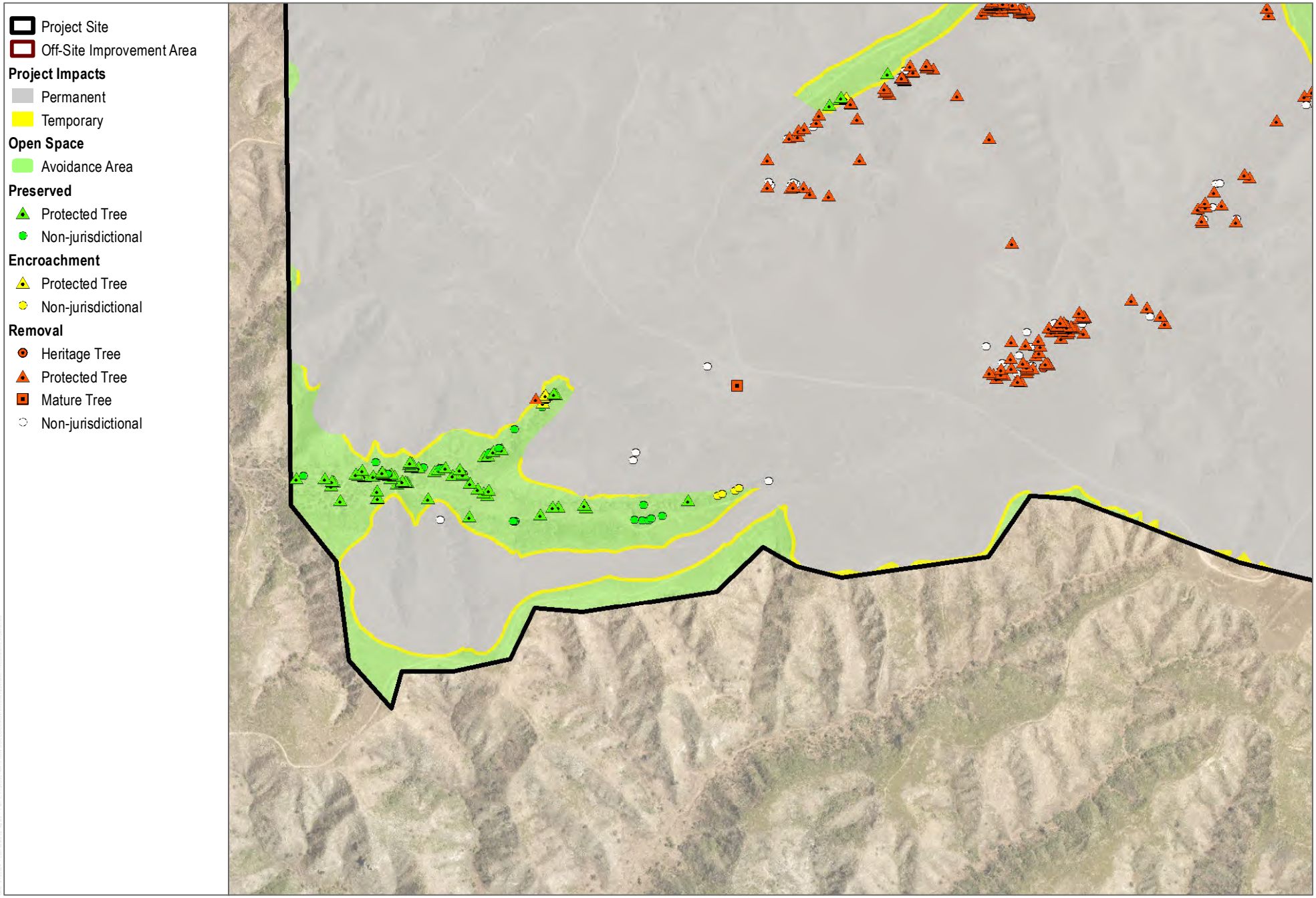
APPENDIX C1

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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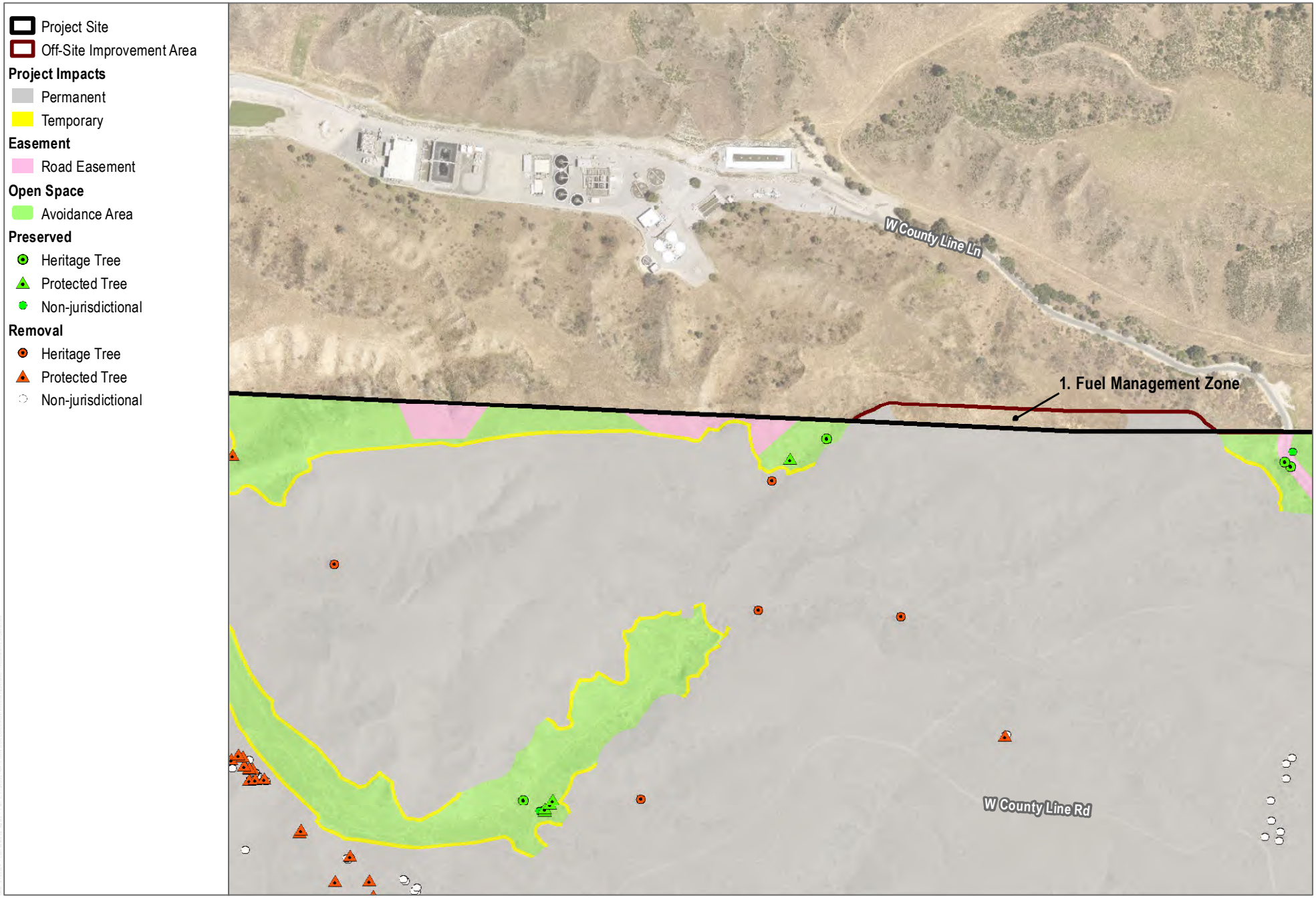
APPENDIX C2

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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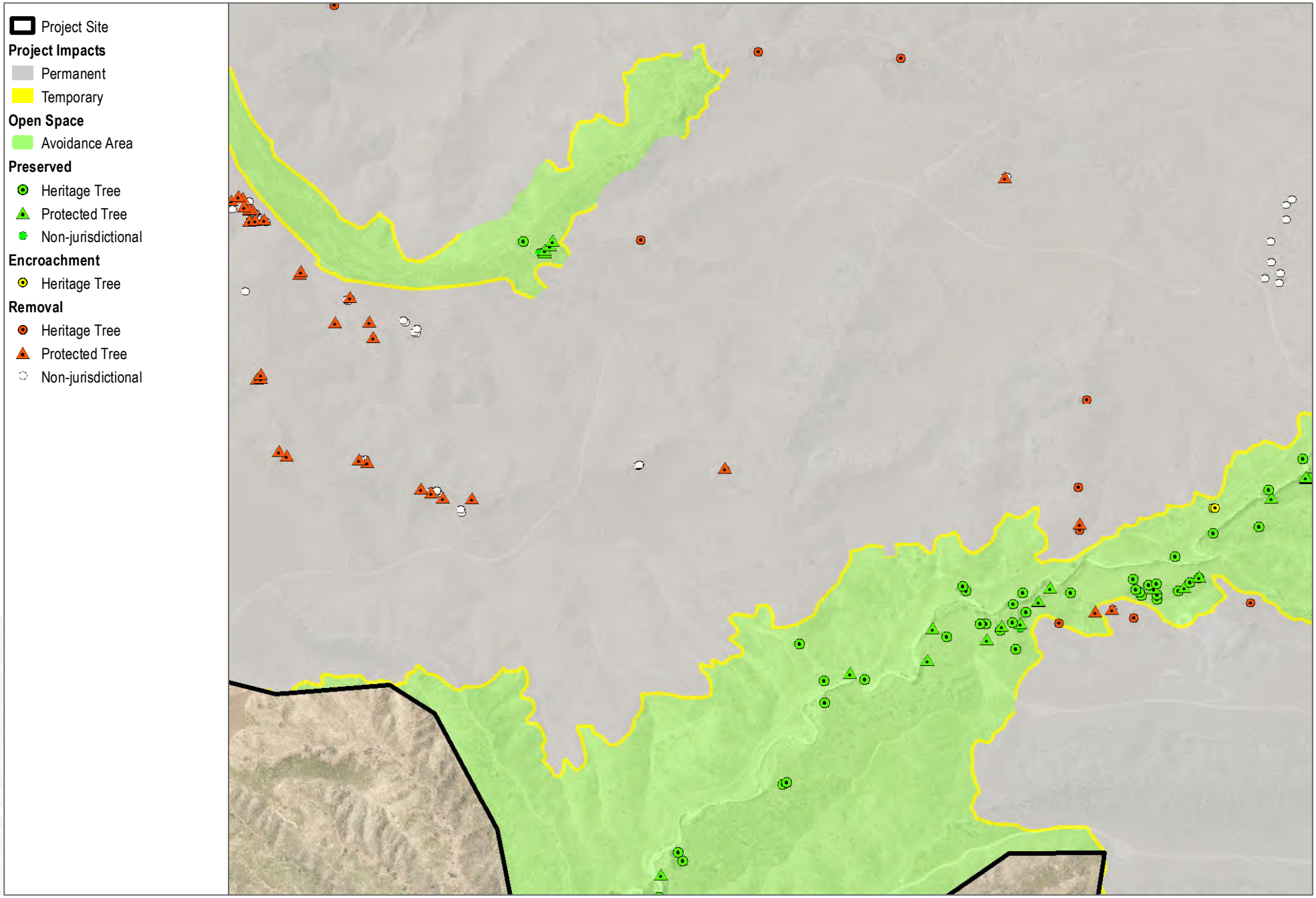
APPENDIX C3

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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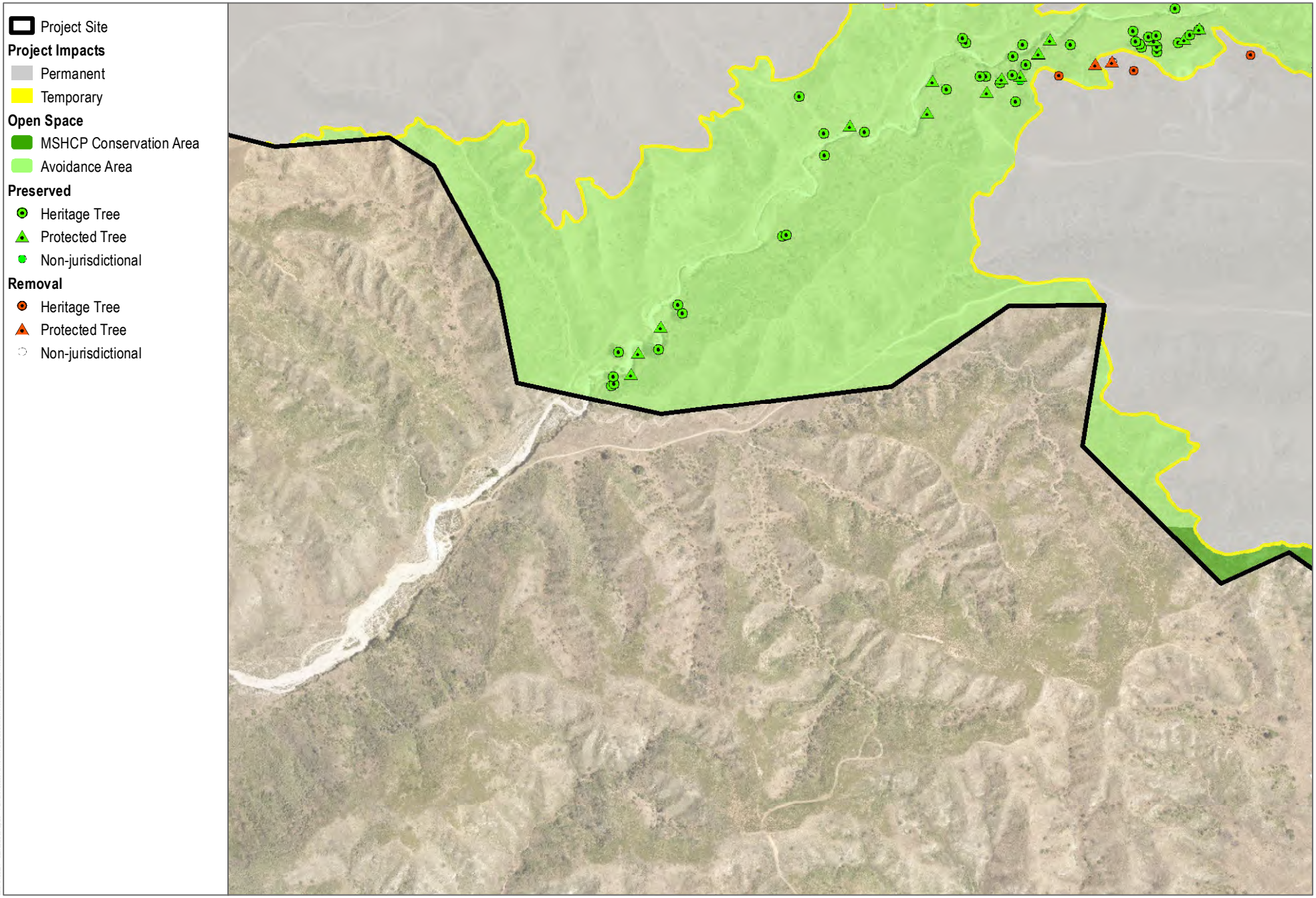
APPENDIX C4

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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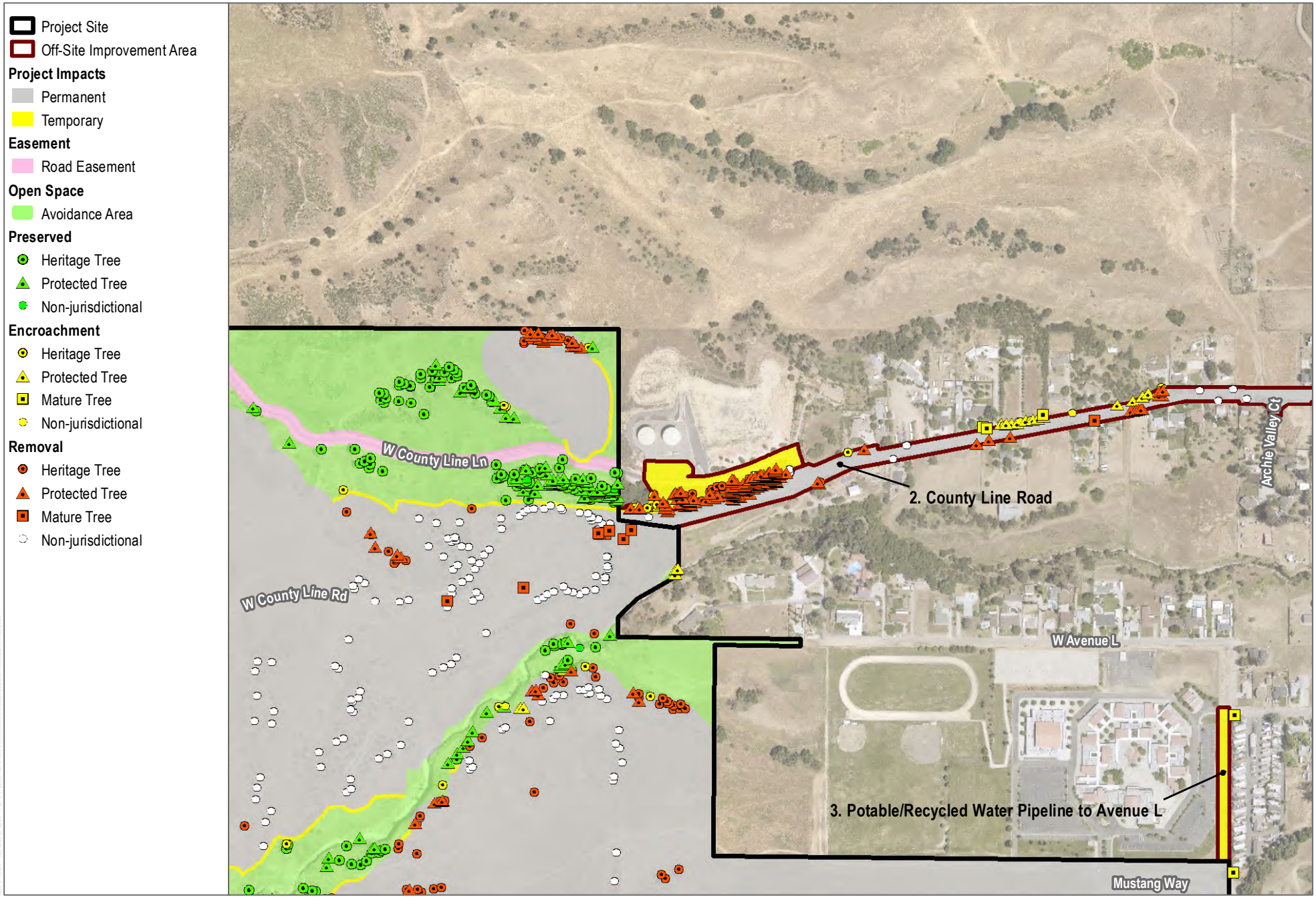
APPENDIX C5

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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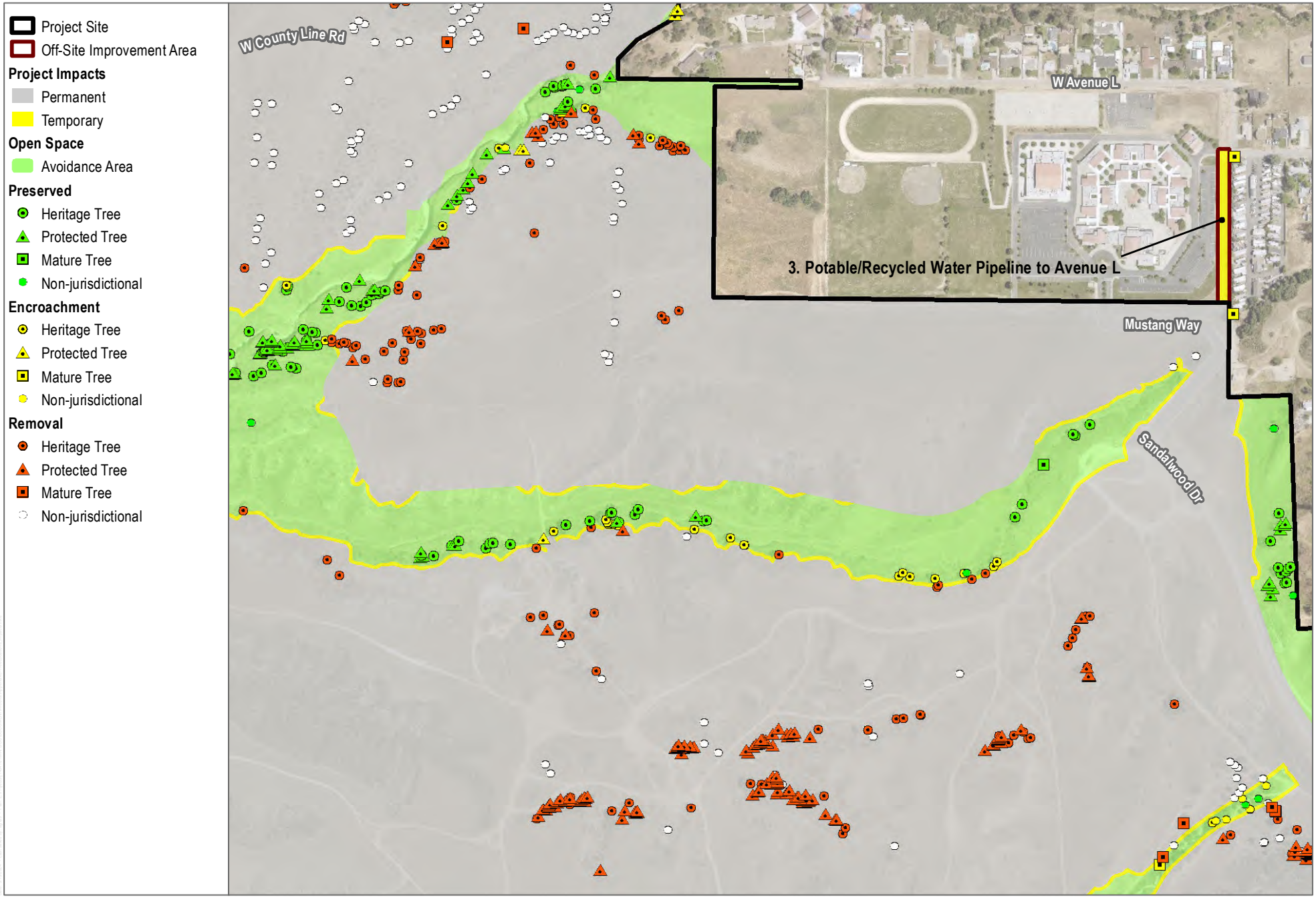
APPENDIX C6

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

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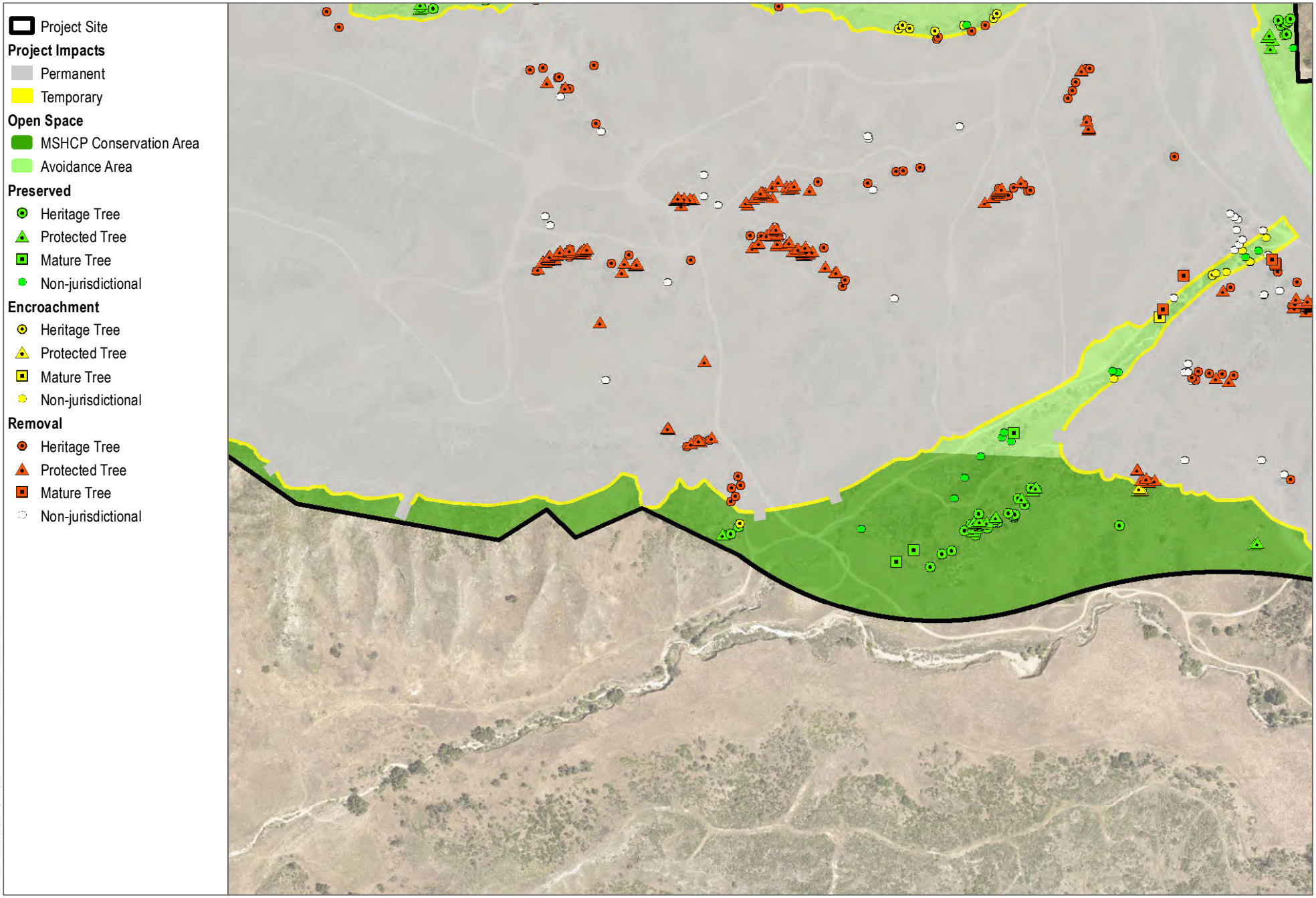
APPENDIX C7

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

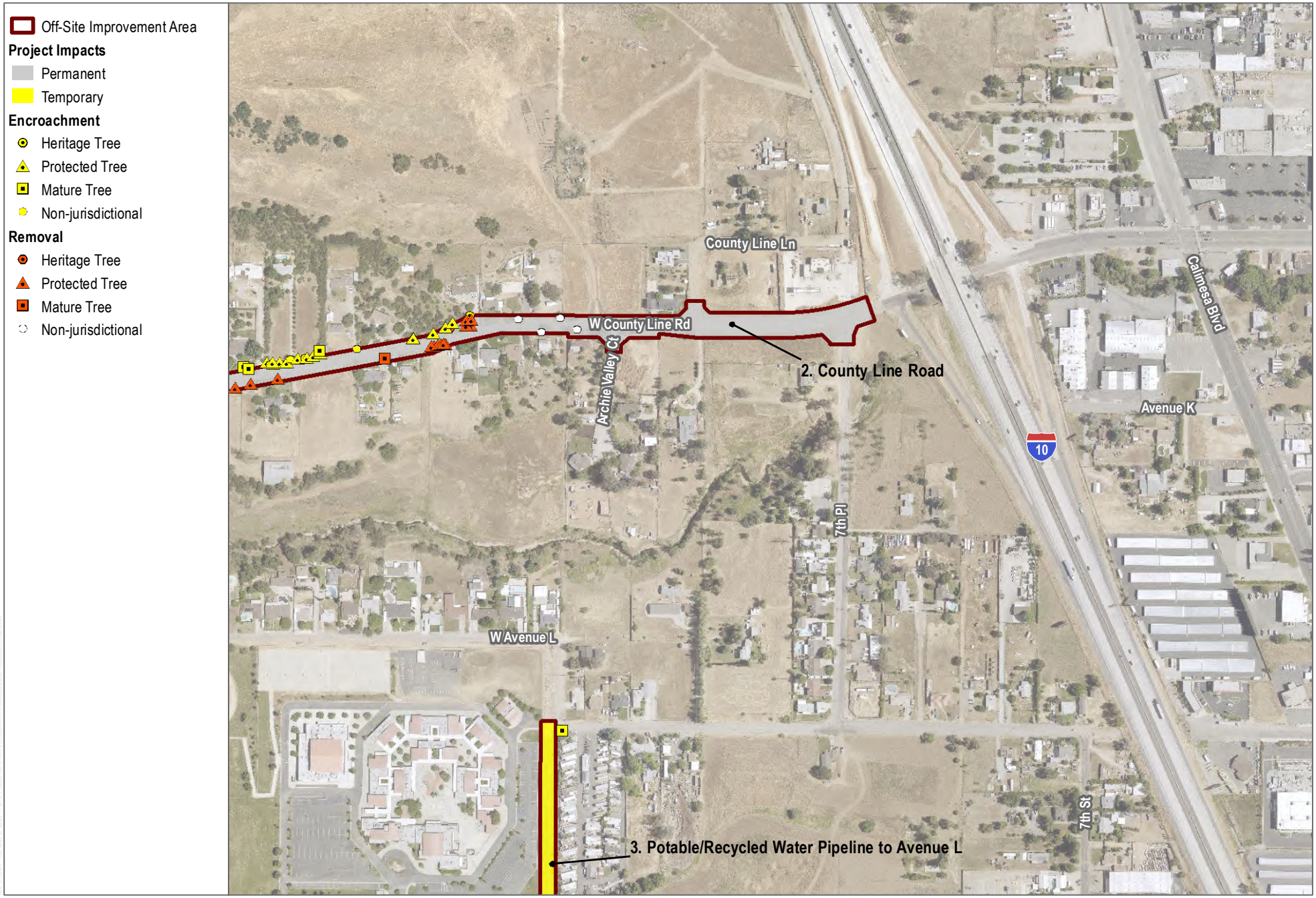
DUDEK

0 300 600 Feet

APPENDIX C8

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

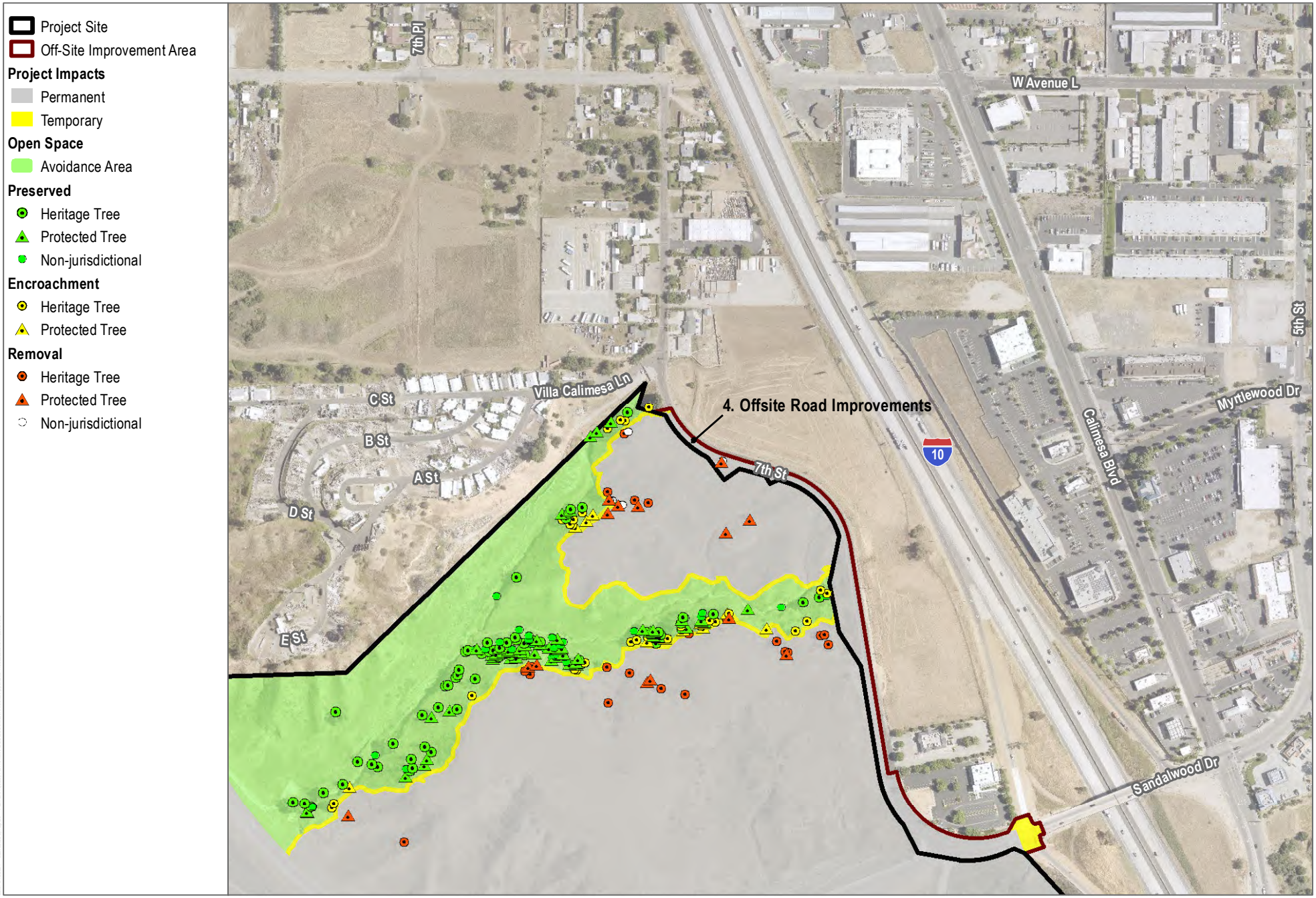
DUDEK

0 300 600 Feet

APPENDIX C9

Tree Impact Exhibit

Mesa Verde Specific Plan Project



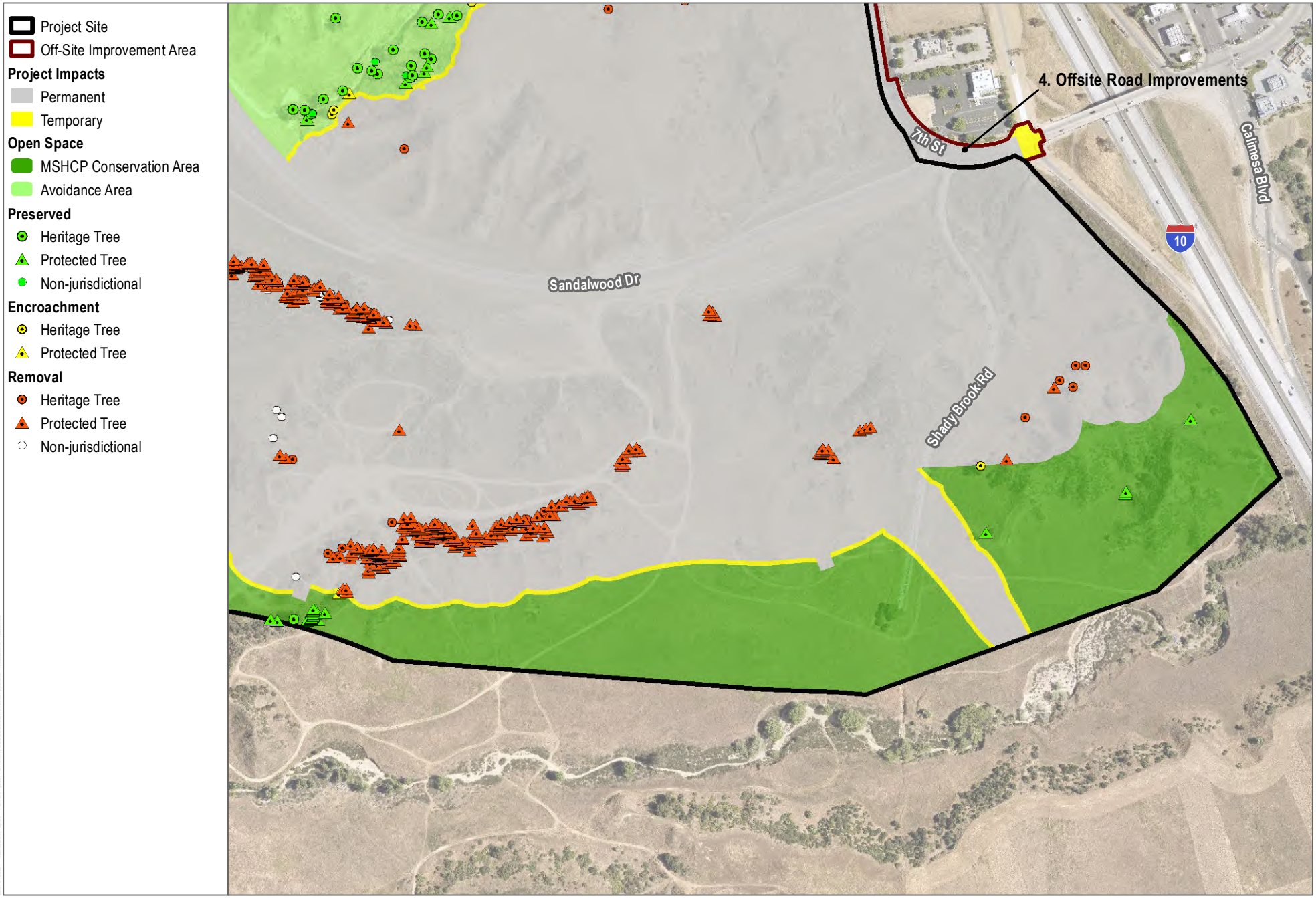
SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

APPENDIX C10

Tree Impact Exhibit

Mesa Verde Specific Plan Project



SOURCE: Hunsaker 2024; Riverside County; NAIP

DUDEK

0 300 600 Feet

APPENDIX C11

Tree Impact Exhibit

Mesa Verde Specific Plan Project