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Ecological Consulting, Inc.

Town of Danville
Diablo Road Trail Project
Danville, California

Biological Resources Report

June 2022

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1.0 INTRODUCTION

Sequoia Ecological Consulting, Inc. (Sequoia) has prepared this Biological Resources Report (Report) for the proposed Diablo Road Trail Project (Project) located along Diablo Road in the City of Danville, Contra Costa County, California (Figures 1 and 2). Our analysis provides a description of existing biological resources on the Project site and identifies potentially significant impacts that could occur to sensitive biological resources from the proposed Project.

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and other resource organizations including the California Native Plant Society (CNPS). Biological resources also include waters of the United States and State of California, as regulated by the U.S. Army Corps of Engineers (USACE), California Regional Water Quality Control Board (RWQCB), and CDFW. Please note that this analysis assesses the potential for impacts to regulated waters but does not provide the level of detail required for a formal delineation of "waters of the United States" suitable for submittal to USACE, the regulatory agency that defines waters of the United States. A formal wetland delineation was performed in December 2021 and an Aquatic Resources Delineation Report is provided as Appendix A.

In accordance with the California Environmental Quality Act (CEQA) checklist, this Report also provides mitigation measures for "potentially significant" impacts that could occur to biological resources pursuant to CEQA (Pub. Resources Code §§ 21000 et seq.; 14 Cal. Code Regs §§ 15000 et seq). The prescribed mitigation measures would reduce impacts to levels considered "less than significant" pursuant to CEQA. Accordingly, this Report is suitable for review or inclusion in a review pursuant to CEQA by the Town of Danville for the proposed Project.

2.0 LOCATION AND SETTING

The proposed Project is located along Diablo Road in Danville, Contra Costa County, California, approximately 0.59-mile east of Highway 680 and five miles from the western entrance of Mt. Diablo State Park (Figures 1 and 2). The Project site is located within private lands and winds along Diablo Road from its intersection with Fairway Drive to Blackhawk Road to the east to approximately 400 feet west of the intersection of Avenue Nueva and Diablo Road. The Project site is located immediately north of East Branch Green Valley Creek, along Diablo Road shoulder and property belonging to the Magee Cattle Ranch, and south of single-family residential development. The Project site is characterized as highly disturbed, ruderal (weedy) habitat with overhanging mixed riparian woodland canopy and nonnative annual grasslands. Consequently, due to the location of the Project site along the shoulder of a busy thoroughfare and the subsequent regular disturbance regime, native habitats on the Project site are absent.

3.0 PROJECT DESCRIPTION

The proposed Project consists of construction of an 8-foot-wide off-street paved multi-use path with 2-foot shoulders along the southern shoulder of Diablo Road. The proposed Project is envisioned as a 0.9-mile, mostly Class I, mixed-use path for pedestrians and cyclists that will connect the Diablo Road/Green Valley Road corridor to the west with Blackhawk Road/Mt. Diablo State Park south access to the east.

The proposed Project is located within the Town of Danville and public right of way (ROW) and on easements to be obtained from private property owners. The west end of the Project would terminate just east of the intersection of Fairway Drive and Diablo Road and the east end of the Project would terminate approximately 400 feet west of the intersection of Avenue Nueva and Diablo Road.

Completion of the proposed Project would conclude emergency repairs required to protect Diablo Road in place as a result of erosion. The Project would stabilize slope and improve erosion protection. The Project would also provide bicyclists a safer alternative to Diablo Road and would help close a multi-purpose trail gap between the existing Diablo Road Trail (aka Barbara Haile Trail) and access to Mount Diablo State Park. These benefits are described in the policies and objectives of the Town of Danville Bicycle Master Plan, Danville's 2030 General Plan, and the Contra Costa Countywide Bicycle and Pedestrian Plan.

The proposed path would be 8 feet wide with 2-foot shoulders for a total width of 12 feet in most locations, narrowing to a lesser width in constrained locations. Typically, the trail would be an asphalt trail installed over aggregate base, with gravel shoulders.

Guard rails, fencing, and retaining walls would be constructed where the trail is constrained either by existing physical or topographic features, property lines, and easement boundaries. Retaining walls would be constructed with wood supported on piers; however, mechanically stabilized earth, concrete barrier, block walls, or other types could be utilized in the final design. Most retaining walls would be less than 3 feet tall, though in a few locations local topography would require the construction of walls up to 5 feet in height. The retaining walls would have a blended visual appearance to existing walls in the area.

The proposed Project will also include a pedestrian and bicycle roadway crossing at the intersection of Diablo Road in the vicinity of Fairway Drive. The crossing would connect to the existing Diablo Road Trail Class I bicycle/pedestrian path that lies parallel to Diablo Road on the north side of the roadway. The crossing will include: crosswalk striping and pavement markings; regulatory, warning and guide signage; at-grade asphalt concrete ADA ramps (landings) with truncated domes at existing and proposed trailheads; High-Intensity Activated Crosswalk System (HAWK); advanced warning beacon system; and associated electrical infrastructure.

The proposed Project would require the installation of new culverts or culvert extensions throughout the alignment. The type, size and material of culvert extensions would be designed to match existing conditions.

Total excavation and fill of soils for the proposed Project would require approximately 115 cubic yards of imported soils and 400 cubic yards of exported soil. Material brought on to the site would be tested in accordance with local and state requirements to ensure contaminated material is not brought on site. Material that is not removed from the Project area once excavated would be stockpiled and stabilized until it could be off-hauled.

Vegetation and tree removal would be required to construct the trail and would include the removal of native trees and non-native trees. It is estimated that nine native coast live oaks with diameters at breast height (DBH) of approximately 12 to 30 inches, six native valley oaks with DBH ranging from 14 to 42 inches, and ten non-native eucalyptus with DBH ranging from 37 to 66 inches would be removed. Protected trees would be replanted within the project area at a ratio consistent with local tree protection ordinances and California Department of Fish and Wildlife (CDFW) replanting requirements.

Underground utilities would remain in place and no utility relocation is required. No additional or expanded use of water or wastewater facilities is proposed as part of this Project.

Access to the construction site would occur from Diablo Road and adjacent roads. While final staging areas would be decided by the contractor, staging would primarily occur within the proposed trail alignment. These areas would be used to store and stage materials and equipment at different times throughout Project construction. Staging areas outside of the proposed alignment would typically consist of previously disturbed areas with bare, gravel, or paved surfaces.

Trail construction is anticipated to take approximately 6 months to complete and would begin around May 2023.

Following completion of the trail, the trails would be maintained through a Geologic Hazards Abatement District (GHAD) and in accordance with easement agreements. Trail operation and maintenance would require occasional sweeping, litter pick-up, and vegetation and tree trimming to maintain adequate vertical clearance for trail users.

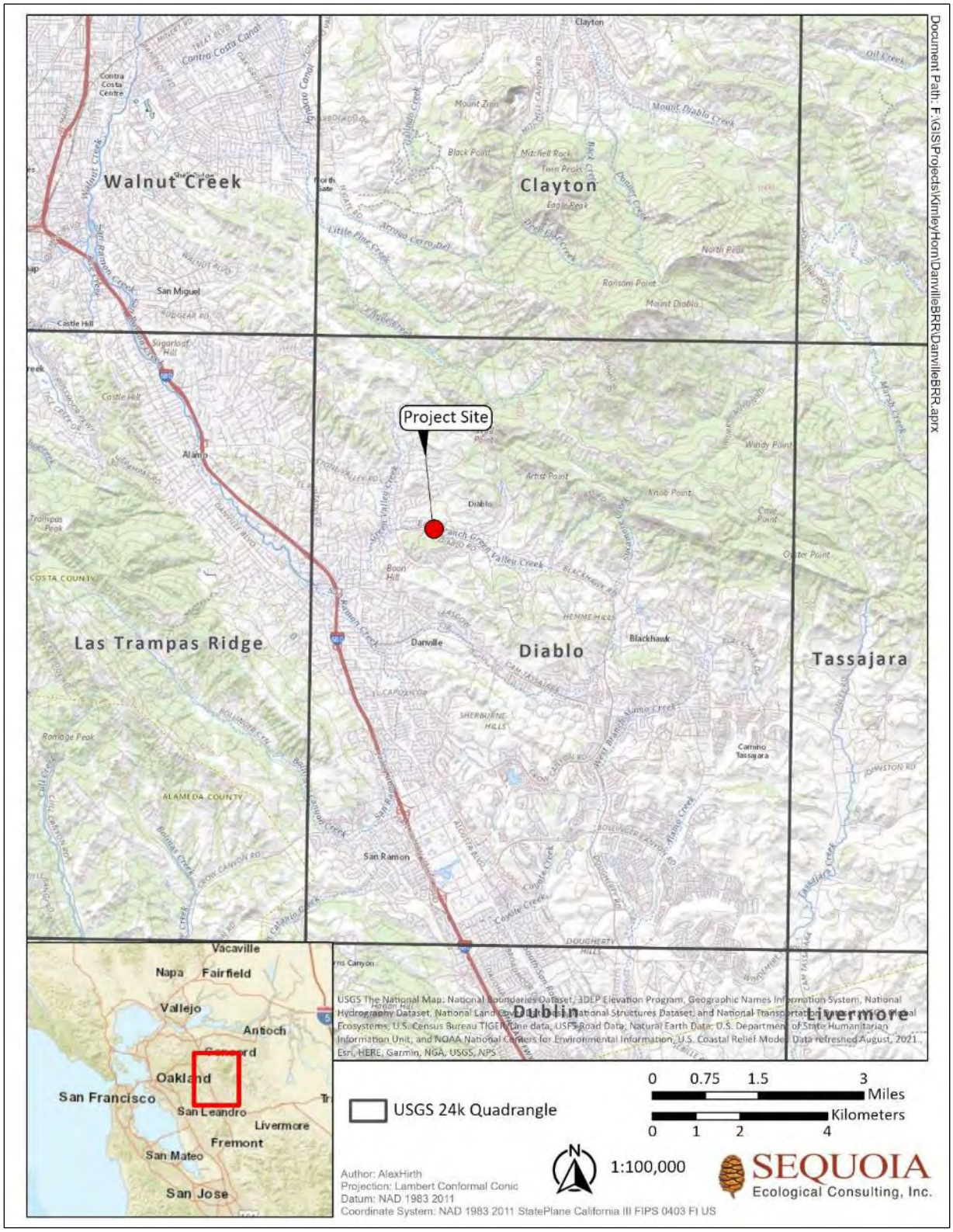

Figure 1. Regional Map of the Diablo Road Trail Project Site.

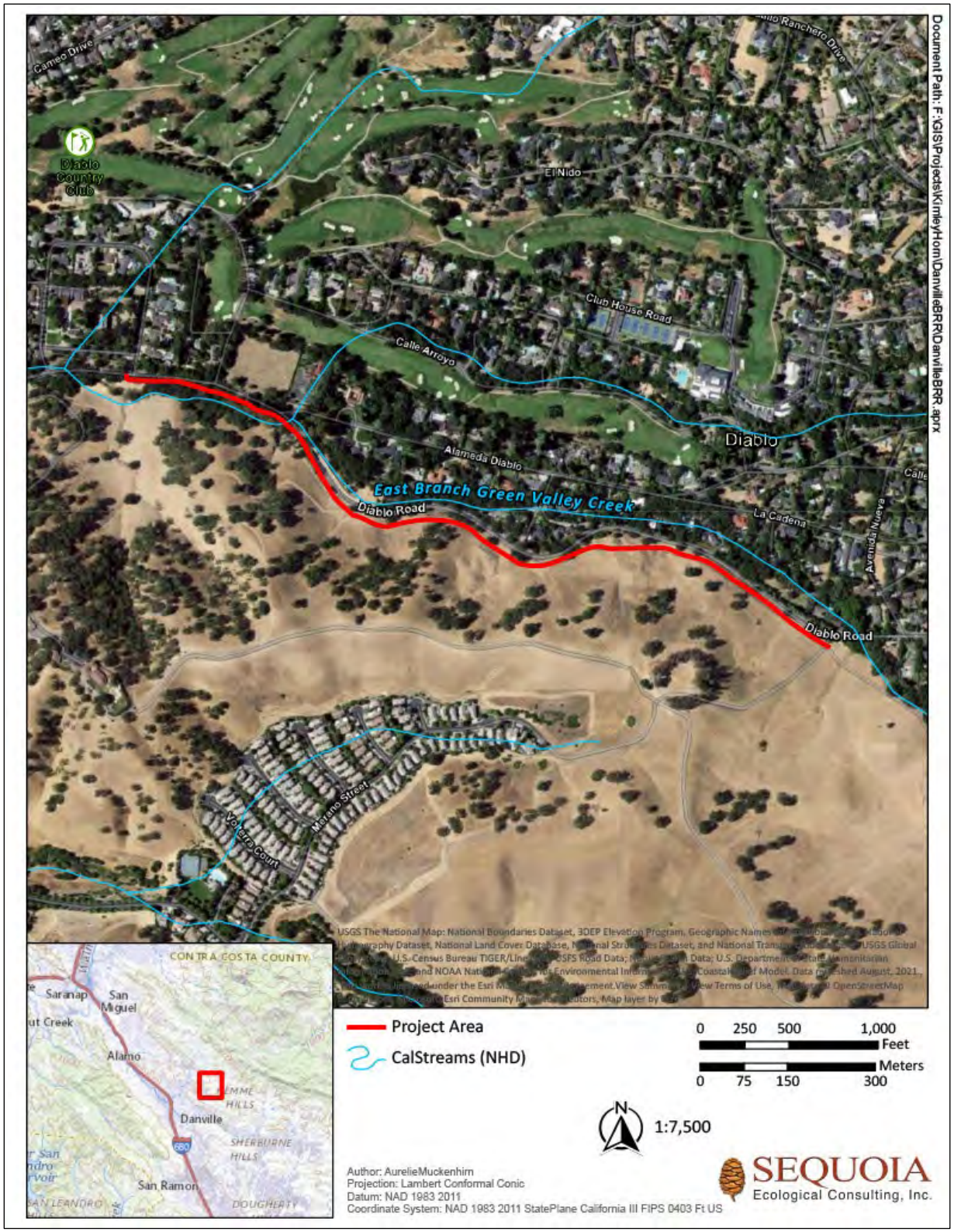

Figure 2. Location Map of the Diablo Road Trail Project Site.

4.0 REGULATORY SETTING

Regulatory authority over biological resources is shared by federal, state, and local agencies under a variety of laws, ordinances, regulations, and statutes. Primary authority for biological resources lies within the land use control and planning authority of local jurisdictions (in this instance the Town of Danville). Below we provide a summary of these regulatory authorities and a brief discussion on applicability to the proposed Project. More in-depth analyses are provided in Section 6 (Results) and Section 7 (Discussion and Impacts Assessment).

4.1 Federal

4.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) provides protection for federally listed endangered and threatened species and their habitats. A project may obtain permission to take federally listed species in one of two ways: a Section 10 Habitat Conservation Plan (HCP) issued to a non-federal entity, or a Section 7 Biological Opinion from the USFWS and/or the National Oceanic and Atmospheric Administration (NOAA) issued to another federal agency that funds or permits an action (e.g., USACE). Under either Section of the FESA, adverse impacts to protected species are avoided, minimized, and mitigated. Both cases require consultation with the USFWS and/or NMFS, which ultimately issues a Biological Opinion determining whether the federally listed species may be incidentally taken pursuant to the proposed action and authorizing incidental take.

Section 7 of FESA requires that federal agencies develop a conservation program for listed species (FESA 7(a)(a)) and that they avoid actions that will jeopardize the continued existence of the species or result in the destruction or adverse modification of the species' designated critical habitat (FESA 7(a)(2)). FESA Section 9 prohibits all persons and agencies from take of threatened and endangered species (though the prohibition on taking listed plants only applies to plants taken from "areas under Federal jurisdiction" or plants taken "in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law"). Those who violate this mandate face civil and criminal penalties, including civil fines of up to $25,000 per violation, as well as criminal penalties of up to $50,000 and imprisonment for one year. Section 10 of FESA regulates a wide range of activities affecting fish and wildlife designated as endangered or threatened and the habitats on which they rely. Section 10 prohibits activities affecting these protected fish and wildlife species and their habitats unless authorized by a permit from USFWS or NMFS. These permits may include incidental take permits, enhancement of survival permits, or recovery and interstate commerce permits. HCPs under Section 10(a)(1)(B) provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend.

HCPs are required as part of an application for an incidental take permit under Section 10. They describe the anticipated effects of the proposed take, how those impacts will be minimized or mitigated, and how the HCP will be funded.

4.1.1.1 Responsible Agency

FESA gives regulatory authority to USFWS for federally listed terrestrial species and non-anadromous fish. NMFS has regulatory authority over federally listed marine mammals and anadromous fish.

4.1.1.2 *Applicability to the Proposed Project*

The Project site does not provide suitable habitat for federally listed plant or animal species and no designated critical habitat occurs on the Project site. Accordingly, no federally listed species or designated USFWS/NMFS critical habitat would be affected by the proposed Project (Tables 1 and 2).

4.1.2 Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) (16 USC §§ 703–711), as administered by the USFWS, makes it unlawful to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird." This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs.

4.1.2.1 Applicability to the Proposed Project

The Project site provides suitable nesting habitat for common passerine (song birds) and raptors (birds of prey) species. These birds are protected pursuant to MBTA. Prior to commencement of Project-related activities, a preconstruction survey would be performed, and active nests detected would be provided with an appropriately sized non-disturbance buffer. See Impacts Analysis section below.

4.1.3 Bald and Golden Eagle Protection Act of 1940

The Bald and Golden Eagle Protection Act (BGEPA; 16 USC. 668-668c) prohibits anyone from taking, possessing, or transporting a bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), or the parts, nests, or eggs of such birds without prior authorization. This includes inactive nests as well as active nests. Take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb. Activities that directly or indirectly lead to take are prohibited without a permit.

4.1.3.1 Applicability to the Proposed Project

The Project site does not provide suitable foraging or nesting habitat for bald eagle; however, potentially suitable foraging and nesting habitat for golden eagle occurs in the vicinity of the Project site. This species is protected pursuant to the BGEPA and the MBTA. Prior to commencement of Project-related activities, a preconstruction survey for golden eagle would be performed, and active nests detected would be provided with an appropriately sized non-disturbance buffer. See Impacts Analysis section below.

4.1.4 U.S. Army Corps of Engineers – Clean Water Act – Section 404

USACE regulates activities within "waters of the United States" pursuant to congressional acts: Section 404 of the Clean Water Act (CWA; 1977, as amended) and Section 10 of the Rivers and Harbors Act of 1899. Section 404 of the CWA (1977, as amended) requires a permit for discharge of dredged or fill material into waters of the United States. Under Section 404, waters of the United States are defined as all waters that are used currently, or were used in the past, or may be used in the future for interstate or foreign commerce, including waters subject to the ebb and flow of the tide up to the high tide line. Additionally, areas such as wetlands, rivers, and streams (including intermittent streams and tributaries) are considered waters of the United States. The extent of wetlands is determined by examining the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Under normal circumstances, all three of these parameters must be satisfied for an area to be considered a jurisdictional wetland under Section 404 of the CWA. Fill within wetlands is regulated under the CWA through a Nationwide Permit Program and an Individual Permit Program.

4.1.4.1 Applicability to the Proposed Project

East Branch Green Valley Creek is immediately adjacent to the Project site on its western side and falls under USACE jurisdiction pursuant to Section 404 of the CWA; however, as presently designed, the proposed Project will stay above/outside ordinary high-water mark (OHWM) and therefore outside of USACE jurisdiction. Thus, prior authorization from USACE pursuant to Section 404 of the CWA would not be required for the proposed Project.

4.2 State

4.2.1 California Environmental Quality Act

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a proposed discretionary project that the agency will carry out, fund, or approve. Any significant impact must be mitigated to the extent feasible, below the threshold of significance.

4.2.1.1 Applicability to the Proposed Project

This document is suitable for use by the CEQA lead agency (i.e., the Town of Danville) for preparation of any CEQA review document for the proposed Project. This Report has been prepared as a Biology Section suitable for incorporation into an Initial Study, Mitigated Negative Declaration, or Environmental Impact Report.

4.2.2 California Endangered Species Act

The CDFW is responsible for administering the California Endangered Species Act (CESA). Section 2080 of the California Fish and Wildlife Code prohibits take of any species that the Fish and Wildlife Commission determines to be an endangered species or a threatened species. However, CESA does allow for take that is incidental to otherwise lawful development projects. Sections 2081(b) and (c) of CESA allow the CDFW to issue an incidental take permit for a state listed threatened and endangered species only if specific criteria are met (i.e., the effects of the authorized take are minimized and fully mitigated). The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.

4.2.2.1 Applicability to the Proposed Project

No state listed plant or animal species would likely be impacted by the proposed Project (Tables 1 and 2). Historically, the Project site has been highly disturbed due to its location along the shoulder of a busy thoroughfare and within grazed non-native grassland. As a result, there are no native habitats present, and no suitable habitat is present for special-status plants or animals. Furthermore, no special-status plants or animals were detected during surveys conducted by Sequoia in spring and winter of 2021. As such, the proposed Project should not be required to obtain authorization under CESA.

4.2.3 California Fish and Game Code – Section 1600 – Lake or Streambed Alteration Agreement

The CDFW regulates activities within watercourses, lakes, and in-stream reservoirs. Under Section 1602 of the California Fish and Game Code (CFGC)—often referred to as the Lake or Streambed Alteration Agreement (LSAA)—the CDFW regulates activities that would alter the flow or change or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, or lake. Each of these activities requires a Section 1602 permit. Section 1602 requires the CDFW to be notified of any activity that might affect lakes and streams. It also identifies the process through which an applicant can come to an agreement with the state regarding the protection of these resources, both during and following construction.

4.2.3.1 Applicability to the Proposed Project

Impacts to the bed, bank, and/or channel, or associated riparian vegetation of East Branch Green Valley Creek would be regulated by the CDFW pursuant to Section 1602 of the CFGC. As such, a Section 1602 Agreement (i.e., Streambed Alteration Agreement) from CDFW would be required for the proposed Project. See Impacts Analysis section below.

4.2.4 California Fish and Game Code – Section 3500 – Nesting Bird Protection

CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by the CFGC or any regulation made pursuant thereto. CFGC Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that elements of a project (specifically vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, which may be subject to approval by the CDFW and/or the USFWS.

4.2.5 California Fish and Game Code – Fully Protected Species

CFGC Sections 3505, 3511, 4700, 5050, and 5515 afford full protection to a number of specific wildlife species. Fully protected species cannot be taken or possessed under state law, even if federal take authorization is issued, except in connection with a natural communities conservation plan (NCCP) or for the purpose of scientific research and relocation of bird species for the protection of livestock.

4.2.5.1 Applicability to the Proposed Project

The Project site provides suitable habitat for wildlife protected pursuant to CFGC Section 3500 and the MBTA. As such, preconstruction surveys for these species would need to be conducted prior to Project commencement to ensure no mortality of these species occurs as a direct result of the proposed Project.

4.2.6 Regional Water Quality Control Board (RWQCB) – Clean Water Act – Section 401 and Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and RWQCB regulate activities in "waters of the state" (which includes wetlands) through two sources of legal authority: Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (Wat. Code, Div. 7, § 13000 et seq.). The Section 401 water quality certification program allows the state to ensure that activities requiring a federal permit or license comply with state water quality standards. Though similar to Section 404 and 401 requirements, the Porter-Cologne Act applies to all “waters of the state” rather than to the portions thereof below ordinary high water mark. “Waters of the state” is defined as any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code § 13050(e)).

The Porter-Cologne Act requires any person discharging waste or proposing to discharge waste in any region that could affect the quality of the "waters of the state" to file a report of waste discharge. Pursuant to the Porter-Cologne Act, the RWQCB also regulates "isolated wetlands." Functionally, the RWQCB typically evaluates whether an additional waste discharge requirement is necessary for the balance between federal and state jurisdictional boundaries during the 401 certification process. The RWQCB issues a permit or waiver that includes implementing water quality control plans that reflect the beneficial uses to be protected. Waters of the State subject to RWQCB regulation extend to the top of bank, as well as isolated water/wetland features.

On April 2, 2019, the SWRCB adopted Resolution 2019-0015, thereby adopting a document entitled, "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" ("Procedures") for inclusion in the Water Quality Control Plans for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

In taking this action, the SWRCB noted that under the Porter-Cologne Act, discharges of dredged or fill material to waters of the state are subject to waste discharge requirements or waivers thereof. The SWRCB further explained that "although the state has historically relied primarily on requirements in the CWA to protect wetlands, U.S. Supreme Court rulings reducing the jurisdiction of the CWA over wetland areas by limiting the definition of 'waters of the United States' have necessitated the use of California's independent authorities under the Porter-Cologne Act to protect these vital resources."

The Office of Administrative Law (OAL) approved the Procedures on August 28, 2019. Pursuant to the Procedures, the effective date is nine months upon OAL approval. Accordingly, the Procedures became effective May 28, 2020.

By adopting the Procedures, the SWRCB mandated and standardized the evaluation of impacts and protection of waters of the state from impacts due to dredge and fill activities. The Procedures include: 1) a wetland definition; 2) a jurisdictional framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for application submittal, and the review and approval of dredge or fill activities.

The Procedures define an area as a wetland if it meets three criteria: wetland hydrology, wetland soils, and (if vegetated) wetland plants. An area is a wetland if: (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.

Waters of the state, by definition, includes more aquatic features than waters of the U.S., which defines the jurisdiction of the federal government. Waters of the state are not so limited. In addition, the federal definition of a wetland requires a prevalence of wetland vegetation under normal circumstances. To account for wetlands in arid portions of the state, the SWRCB's definition differs from the federal definition in that an area may be a wetland even if it does not support vegetation. If vegetation is present, however, the SWRCB's definition requires that the vegetation be wetland

vegetation. The SWRCB's definition clarifies that vegetated and unvegetated wetlands will be regulated in the same manner.

The Procedures also include a jurisdictional framework that applies to aquatic features that meet the wetland definition. The jurisdictional framework will guide applicants and staff in determining whether an aquatic feature that meets the wetland definition will be regulated as a water of the state. The jurisdictional framework is intended to exclude from regulation any artificially-created, temporary features, such as tire ruts or other transient depressions caused by human activity, while still capturing small, naturally-occurring features, such as seasonal wetlands and small vernal pools that may be outside of federal jurisdiction. The Procedures do not expand the SWRCB's jurisdiction beyond areas already under SWRCB's jurisdiction.

The Procedures exclude the following agricultural features from the protections accorded to wetlands: (1) ditches with ephemeral flow that are not a relocated water of the state or excavated in a water of the state; (2) ditches with intermittent flow that are not a relocated water of the state or excavated in a water of the state, or that do not drain wetlands other than any wetlands described in (4) or (5) below; (3) ditches that do not flow, either directly or through another water, into another water of the state; (4) artificially irrigated areas that would revert to dry land should application of waters to that area cease; or (5) artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, and settling basins.

The Procedures clarify what information and analysis the applicant needs to submit to have a complete application. The Procedures standardize when an alternative analysis needs to be conducted and set a minimum mitigation ratio for any permanent impacts to waters of the state resulting from dredge and fill activities.

When an alternatives analysis is required, the applicant must demonstrate that the proposed alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA). The term practicable means available and capable of being done after taking into consideration cost, existing technology, and other logistics in light of the overall project purpose.

4.2.6.1 Applicability to the Proposed Project

East Branch Green Valley Creek immediately adjacent to the Project site falls under RWQCB/SWRCB jurisdiction pursuant to Section 401 of the CWA; however, as presently designed, the proposed Project will stay above/outside OHWM and therefore outside of RWQCB/SWRCB jurisdiction. Thus, prior authorization from RWQCB/SWRCB pursuant to Section 401 of the CWA would not be required for the proposed Project. However, portions of the Project alignment appear to encroach below top-of-bank, and a majority of the Project is within the riparian corridor, both of which may be regulated by RWQCB and necessitate state authorization through the Waste Discharge Requirements (WDR) Program. See Impacts Analysis section below.

To comply with the Porter-Cologne Act, adequate pre- and post-construction Best Management Practices (BMPs) will be planned and incorporated into Project implementation plans to protect

downstream waterways. In addition, the Project will develop a Storm Water Pollution Prevention Plan (SWPPP) demonstrating BMPs that will be installed/implemented prior to Project commencement. The SWPPP will be submitted to the Town of Danville as a condition of Project approval. Stormwater protection and treatment measures will be implemented to ensure that the proposed Project remains in compliance with the Porter-Cologne Act and that discharges of dredged or fill material do not enter waters of the State.

4.3 Local

4.3.1 Town of Danville 2030 General Plan

The Town of Danville (Town), the lead agency for the proposed Project, adopted a General Plan on March 19, 2013 (Town of Danville 2030 General Plan) to address the Town's goals, policies, and programs regarding development, resource management, and public safety. The Resources and Hazards Element of the Town's 2030 General Plan provides the following environmental quality goals and policies pertaining to biological resources applicable to this Project:

Goal 21: Protect and enhance Danville's natural features, including its hillsides, ridgelines, creeks, vegetation, and wildlife.
Goal 22: Improve water quality in Danville and the water bodies that receive runoff from Danville, including San Francisco Bay.

4.3.1.1 Applicability to the Proposed Project

The proposed Project is located on Diablo Road within highly disturbed ruderal and non-native annual grassland habitat. Due to the location of the Project site along the shoulder of this busy thoroughfare and the subsequent regular disturbance regime, native habitats on the Project site are absent. Thus, no special-status species or their habitats will be impacted by the proposed Project. In addition, although the proposed Project is located immediately adjacent to East Branch Green Valley Creek, Project-related activities will remain outside of this state and federally jurisdictional aquatic feature, and a SWPPP, including pre- and postconstruction BMPs, will be implemented to ensure no discharges of dredged or fill material enter waters of the United States/State.

4.3.2 Town of Danville Tree Preservation Ordinance

The Town of Danville's Tree Preservation Ordinance (Municipal Code, Section 32-79) requires acquisition of a Tree Removal Permit prior to removal of certain trees within the City Limits. A Tree Removal Permit for tree removal is required if the tree(s) are on the Town's list of protected, heritage, and/or memorial trees, as defined below:

Protected Trees: Any of the following native trees having a single trunk or main stem 10 inches or greater in diameter or multiple trunk trees with tree trunks totaling 20 inches in diameter, measured 4.5 feet above natural grade:

- Blue oak (*Quercus douglasii*)
- California bay (*Umbellularia californica*)
- California black oak (*Quercus kelloggii*)
- California buckeye (*Aesculus californica*)
- California sycamore (*Platanus racemosa*)
- Canyon live oak (*Quercus chrysolepis*)
- Coast live oak (*Quercus agrifolia*)
- Interior live oak (*Quercus wislizenii*)
- Madrone (*Arbutus menziesii*)
- London plane tree (*Plantanus acerifolia*)
- Valley oak (*Quercus lobata*)
- White alder (*Alnus rhombifolia*)

Heritage Trees: Any single trunked tree, regardless of species, which has a trunk diameter of 36 inches or greater, measured 4.5 feet above natural grade. Multi-trunk trees are not considered heritage trees therefore no permit would be required.

Memorial Trees: A tree planted on public property in memory of or commemoration of an individual or individuals.

4.3.2.1 Applicability to the Proposed Project

Removal of any protected, heritage, and/or memorial trees, as defined in the Town of Danville's Tree Preservation Ordinance (Municipal Code, Section 32-79) would require acquisition of a Tree Removal Permit and appropriate mitigation. See Impacts Analysis section below.

5.0 METHODS

Sequoia performed various desktop and in-field assessments in support of this Report. Using those results, Sequoia employed various site assessments to evaluate the presence of and/or likelihood of occurrence of sensitive resources on the Project site.

5.1 Definitions

5.1.1 Special-Status Species

For the purposes of this document, special-status species include:

- Plant, fish, and wildlife species listed as Threatened or Endangered under FESA (50 CFR 17), and candidates for listing under the statute;
- Species protected by the CFGC, including nesting birds and Fully Protected species;
- Plant, fish, and wildlife species listed as Threatened or Endangered under CESA; and the laws and regulations for implementing CESA as defined in CFGC §2050 et seq. and the California Code of Regulations (CCR) 14 CCR §670.1 et seq., and candidates for listing under the statute (CFGC §2068);
- Species meeting the definition of 'Rare' or 'Endangered' under CEQA Guidelines 14 CCR §15125 (c) and/or 14 CCR §15380, including plants listed on CNPS Lists 1A, 1B, 2A, and 2B, 3, and 4. Plants occurring on CNPS Ranks 3 and 4 are "plants about which more information is necessary," and "plants of limited distribution" (CNPS 2001). These plants may be included as special-status species on a case-by-case basis due to local significance or recent biological information (see additional definition information below);
- USFWS Birds of Conservation Concern;
- Fully Protected species, as designated by the CDFW (CFGC 3511, 4700, 5050, and 5515);
- Species of Special Concern, as designated by the CDFW and required by 14 CCR §15380; and/or
- Avian species protected under the MBTA of 1918.

Addition information regarding these definitions is provided below:

5.1.1.1 Federally Threatened or Endangered Species

A species listed as Threatened or Endangered under the FESA is protected from unauthorized "take" (that is, harass, harm, pursue, hunt, shoot, trap) of that species. If it is necessary to take a federally listed Threatened or Endangered species as part of an otherwise lawful activity, it would be necessary to receive permission from the USFWS prior to initiating the take.

5.1.1.2 State Threatened or Endangered Species

A species listed as Threatened or Endangered under the CESA is protected from unauthorized "take" (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to "take" a state Threatened or Endangered species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the "take."

5.1.1.3 CDFW Species of Special Concern

California Species of Special Concern are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation affords no legally mandated protection; however, some of these species could be considered "rare" and must therefore be considered in any project that will, or is currently, undergoing CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

5.1.1.4 CNPS Rank Species

The CNPS maintains an *inventory* of special-status plant species. This inventory has four lists of plants with varying rarity. These lists are Rank 1, Rank 2, Rank 3, and Rank 4. Although plants on these lists have no formal legal protection (unless they are also state or federally listed species), CDFW requests the inclusion of Rank 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. Rank 1 and 2 species are defined below:

- Rank 1A: Presumed extinct in California;
- Rank 1B: Rare, threatened, or endangered in California and elsewhere;
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere;
- Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere.

Under the CEQA review process only CNPS Rank 1 and 2 species are considered due to meeting CEQA's definition of "rare" or "endangered." However, Rank 3 and 4 species are not regarded as significant pursuant to CEQA.

5.1.1.5 Fully Protected Birds

Fully Protected birds are protected under CFGC 3511 and may not be "taken" or possessed (i.e., kept in captivity) at any time.

5.2 Desktop Review

Sequoia reviewed relevant databases and literature for baseline information regarding biological resources occurring and potentially occurring on the Project site and the immediate vicinity. The review included the following sources:

- USFWS Information for Planning and Consultation (IPaC) search (USFWS 2021a), and Critical Habitat Portal (USFWS 2021b; Appendix B);
- CNPS Online Inventory of Rare and Endangered Plants of California for the Diablo, California USGS 7.5-minute quadrangles (CNPS 2021);
- NMFS Online Species List Query (NMFS 2021, Appendix C);
- Natural Resources Conservation Service's (NRCS) Web Soil Survey (2021a), hydric soils list (NRCS 2021b),
- USFWS National Wetlands Inventory (NWI; Figure 4);
- CDFW California Natural Diversity Database (CNDDB) for the Project polygon and a 3-mile buffer (CDFW 2021; Figures 5 and 6); and,
- Aerial photographs (Google Earth Pro 2021).

5.3 Site Assessment

Sequoia biologist, Aurelie Muckenhirn, conducted surveys on the Project site on December 15, 2021 to record biological resources and to assess the limits of areas potentially regulated by resource agencies (i.e., preliminary hydrology analysis). Surveys involved searching all habitats on the site and recording all plant and wildlife species observed. Sequoia cross-referenced the habitats occurring on the Project site with the habitat requirements of regional special-status species to determine if the proposed Project could directly or indirectly impact these species. Any special-status species or suitable habitat was documented.

Tables 1 and 2 present the potential for occurrence of special-status plant and animal species, respectively, known to occur in the vicinity of the Project site, along with their habitat requirements, occurrence classification, and basis for occurrence classification.

5.4 Habitat Assessments

Consecutive transects were traversed at approximately 20-foot intervals throughout the Project site. During the surveys, biologists scanned for special-status species and/or suitable habitat for these species, including foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*), among others. Any special-status species or suitable habitat was documented.

5.4.1 Potential to Occur

Following the site assessment, potential for special-status species to occur in the Project site was evaluated according to the following criteria:

- *No Potential.* Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- *Unlikely.* Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- *Moderate Potential.* Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- *High Potential.* All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

- *Present.* Species is observed on the site or has been recorded (i.e., CNDDB, other reports) on the site recently.

6.0 RESULTS

The results of the desktop review and site assessment conducted on December 15, 2021 are presented below.

6.1 Topography and Hydrology

The Project site is located along the shoulder of Diablo Road immediately north of East Branch Green Valley Creek on its western side and south of the creek on its eastern side. East Branch Green Valley Creek flows east to west and connects with San Ramon Creek in downtown Danville. The Project site slopes slightly from north to south, with short segments of the proposed footprint located below the top-of-bank of the creek, on the western side of the site. Elevation on the Project site ranges from 465 to 581 feet above mean sea level (MSL).

During the site assessment conducted on December 15, 2021, Sequoia performed a preliminary hydrologic analysis and compared information ascertained from the desktop review with present site conditions, specifically, NRCS soil type and USFWS NWI layers (NRCS 2021a, NRCS, 2021b, USFWS 2021c; Figures 3 and 4). This level of analysis does not conform to the amount of detail typically required for a formal wetland delineation suitable for submittal to USACE. On December 9, 2021, a formal wetland delineation was conducted by Sequoia biologists Andrew Ford and Ari Rogers. The Aquatic Resources Delineation Report is provided as Appendix A.

The climate of the Project site, and California overall, is Mediterranean (i.e., dry-summer subtropical), characterized by warm, dry summers with average highs between 70- and 80-degrees Fahrenheit and average lows in the 50s and 60s, and cool, wet winters with average highs in the 50s and average lows in the 40s Fahrenheit. The average annual precipitation is approximately 25.04 inches, falling primarily between November and March (U.S. Climate Data 2021).

6.2 Plant Communities and Wildlife Habitats

On December 15, 2021, Sequoia staff conducted a survey of the Project site and characterized vegetation present. During the survey, biologists also documented plant and wildlife species observed on the Project site. Nomenclature used for plant names follows *The Jepson Manual* Second Edition (Baldwin 2012), while nomenclature used for wildlife follows CDFW's *Complete list of amphibian, reptile, bird, and mammal species in California* (2016). Table 3 and 4 lists plant and wildlife species observed on the Project site.

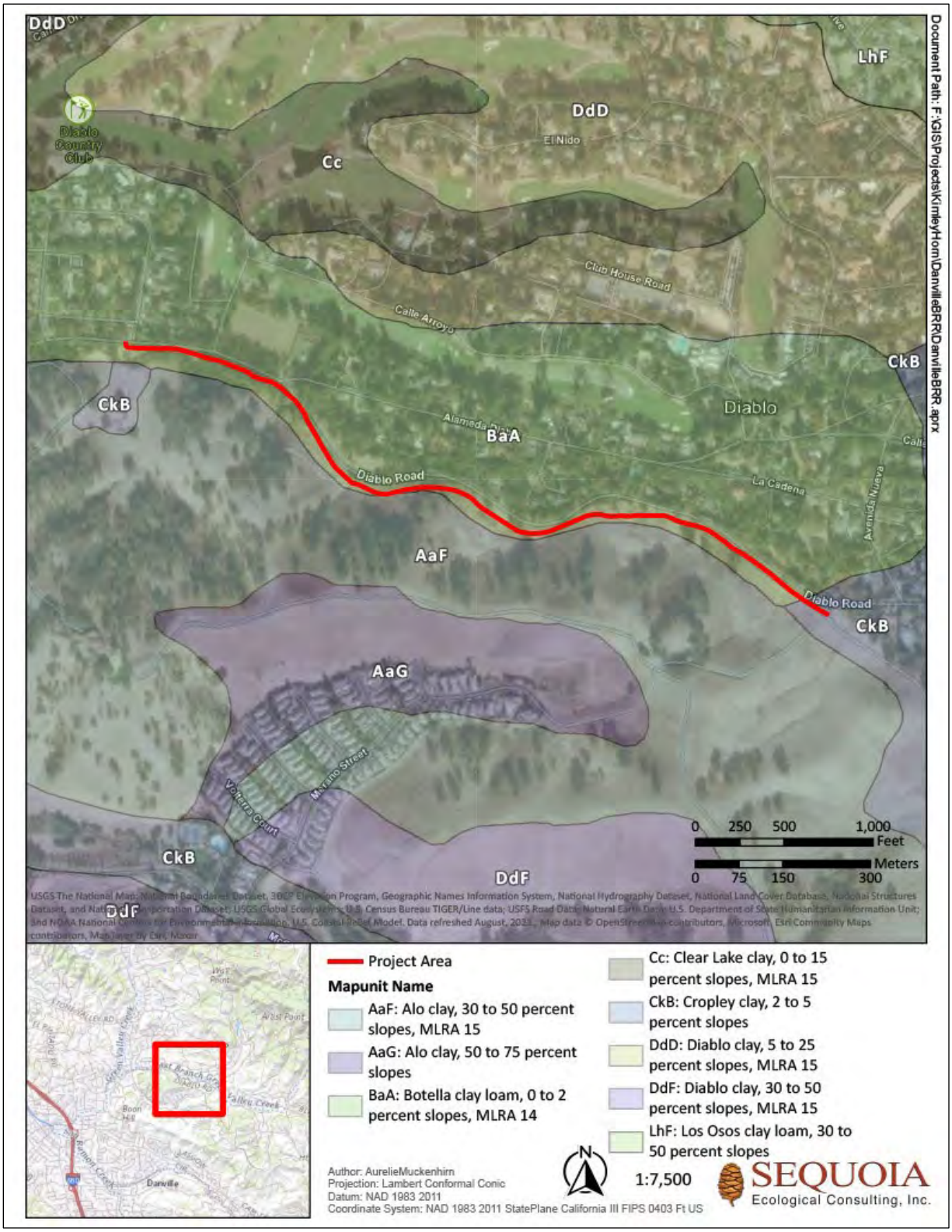

Figure 3. Soil Types on the Diablo Road Trail Project Site.

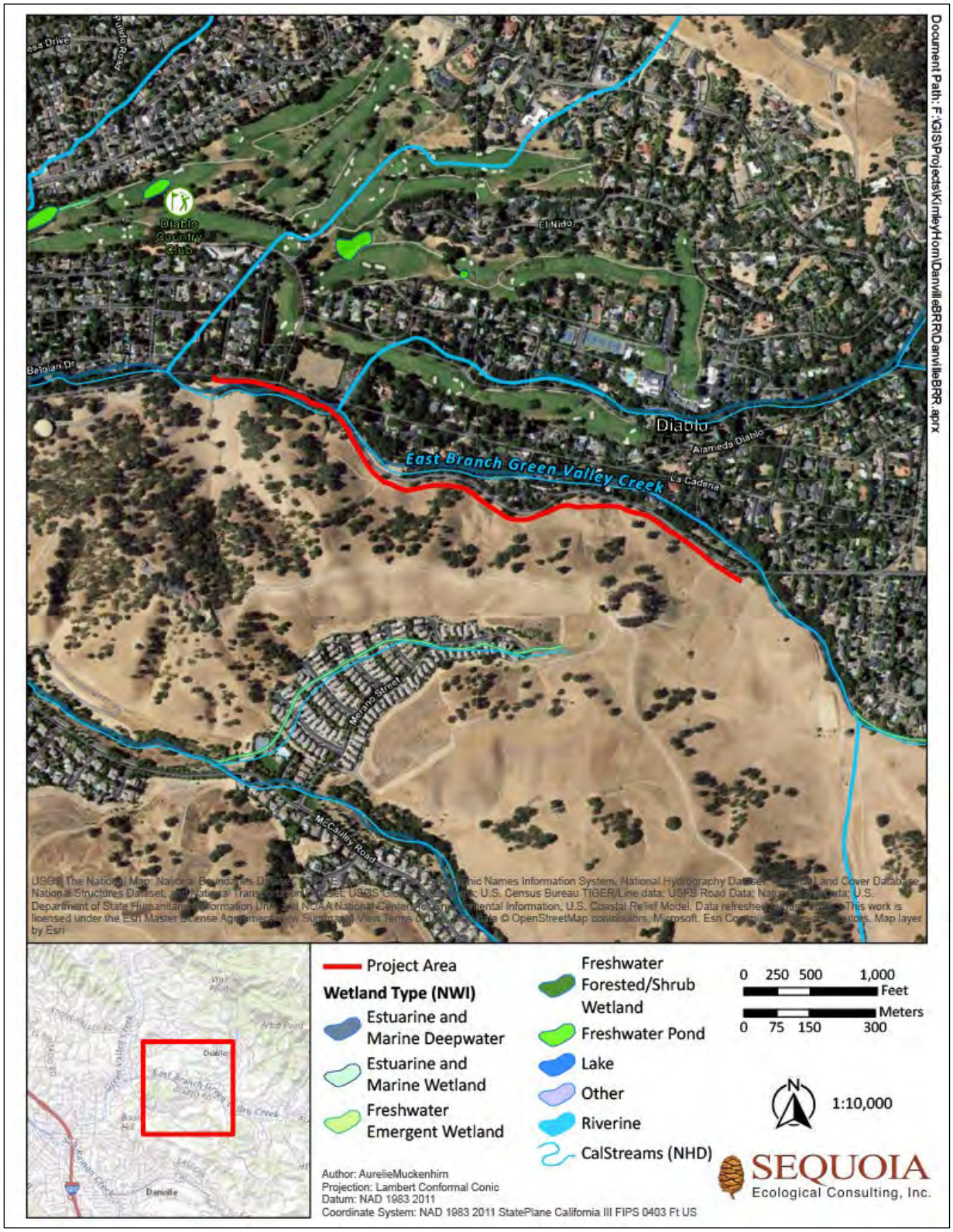

Figure 4. USFWS National Wetlands Inventory on the Diablo Road Trail Project Site.

6.2.1 Ruderal

The Project site is dominated by ruderal herbaceous habitat. Ruderal communities are groupings of plants that thrive in areas disturbed by human activity. Ruderal vegetation is adapted to high levels of disturbance and endures for long periods of time in areas that have continual disturbance. Dominant grass and forb species observed within ruderal communities on the Project site include black mustard (*Brassica nigra*), bristly ox-tongue (*Helminthotheca echioides*), California burclover (*Medicago polymorpha*), poison hemlock (*Conium maculatum*), and yellow star thistle (*Centaurea solstitialis*).

6.2.2 Non-Native Annual Grassland

Non-native annual grassland is comprised primarily of plant species that mature in spring and early summer, before spreading seed and dying in late summer and fall. Non-native annual grassland is found in large patches throughout the Project site, primarily interspersed with ruderal communities. Dominant grass and forb species observed within non-native annual grassland communities on the Project site include slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), and filaree species (*Erodium botrys*, *E. cicutarium*).

6.2.3 Mixed Riparian Woodland

Mixed riparian woodlands are diverse habitats that support numerous plant species that can include grasses, annual and perennial forbs, vines, shrubs, and trees. A variety of plants creates a complex layering of understory and overstory which in turn provides habitat to numerous wildlife species. When found within the bed, channel, or bank of any river, stream, or lake, riparian vegetation is also protected under Section §1602 of the CFGC; and the CDFW has included riparian communities in the CNDDB.

Riparian woodland habitat is present within and surrounding East Branch Green Valley Creek, which lies just outside the Project site. Dominant plant species observed within the riparian woodland community on the Project site include Italian ryegrass (*Festuca perennis*), mugwort (*Artemisia douglasiana*), cattail (*Typha* spp.), giant reed (*Arundo donax*), mulefat (*Baccharis salicifolia*), willows (*Salix exigua*, *S. laevigata*, and *S. losiolepis*), and Fremont cottonwood (*Populus fremontii*).

6.2.4 Wildlife Corridors

Wildlife corridors are habitats that provide connectivity between natural communities otherwise separated by urbanization and other development. Wildlife corridors provide access for animals to travel between these communities for seasonal migration, access to overwintering/summering habitat, breeding, etc. They also allow animals a route to move away from natural disasters and other forms of habitat loss, as well as to recolonize habitats previously extirpated. Wildlife corridors provide opportunities to breed, forage, migrate/emigrate, disperse, and forage (Beier and Loe 1992).

The proposed Project will not interfere with the movement of native wildlife. This Project is located along a narrow strip of shoulder along Diablo Road and within non-native annual grassland. Although East Branch Green Valley Creek functions as a wildlife corridor and is immediately adjacent to the Project site, the creek itself and its function will not be blocked or impeded by the proposed Project.

6.2.5 Special-Status Plants

Figure 5 provides a graphical illustration for special-status plant species occurrences within 3 miles of the Project site. Table 1 provides an assessment of potential to occur of special-status plant species on the Project site. Twenty-one (21) special-status plants have been previously documented within 3 miles of the Project site (CNDDB 2021; CNPS 2021); however, no plants have been observed or mapped onsite. Sequoia analyzed the potential to occur for these plants species, as well as species included in CNPS and IPaC resource lists during the desktop review (Table 1). A number of these species require specialized habitats such as cismontane woodland, chaparral, rocky areas, and alkaline soils that are not found on the Project site.

Accordingly, due to lack of suitable habitat and/or lack of known/recent occurrences in the Project vicinity, these 21 special-status plant species are not expected to occur and are therefore not discussed further in this analysis. These species are Mt. Diablo manzanita (*Arctostaphylos auriculata*), Contra Costa manzanita (*Arctostaphylos manzanita* ssp. *laevigata*), Mt. Diablo fairy lantern (*Calochortus pulchellus*), chaparral harebell (*Campanula exigua*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*), western leatherwood (*Dirca occidentalis*), Mt. Diablo buckwheat (*Eriogonum truncatum*), Jepson's coyote thistle (*Eryngium jepsonii*), San Joaquin spearscale (*Extriplex joaquinana*), fragrant fritillary (*Fritillaria liliacea*), Diablo helianthella (*Helianthella castanea*), Brewer's western flax (*Hesperolinon breweri*), Hall’s bush-mallow (*Malacothamnus hallii*), woodland woolythreads (*Monolopia gracilens),* shining navarretia (*Navarretia nigelliformis* ssp. *radians),* Mt. Diablo phacelia (*Phaceliamphacelioides*), rock sanicle *(Sanicula saxatilis*), Mt. Diablo jewelflower (*Strepthanthus hispidus),* northern slender pondweed (*Stuckenia filiformis* ssp. *aplina),* and oval-leaved viburnum (*Viburnum ellipticum)* (see Table 1, Figure 5).

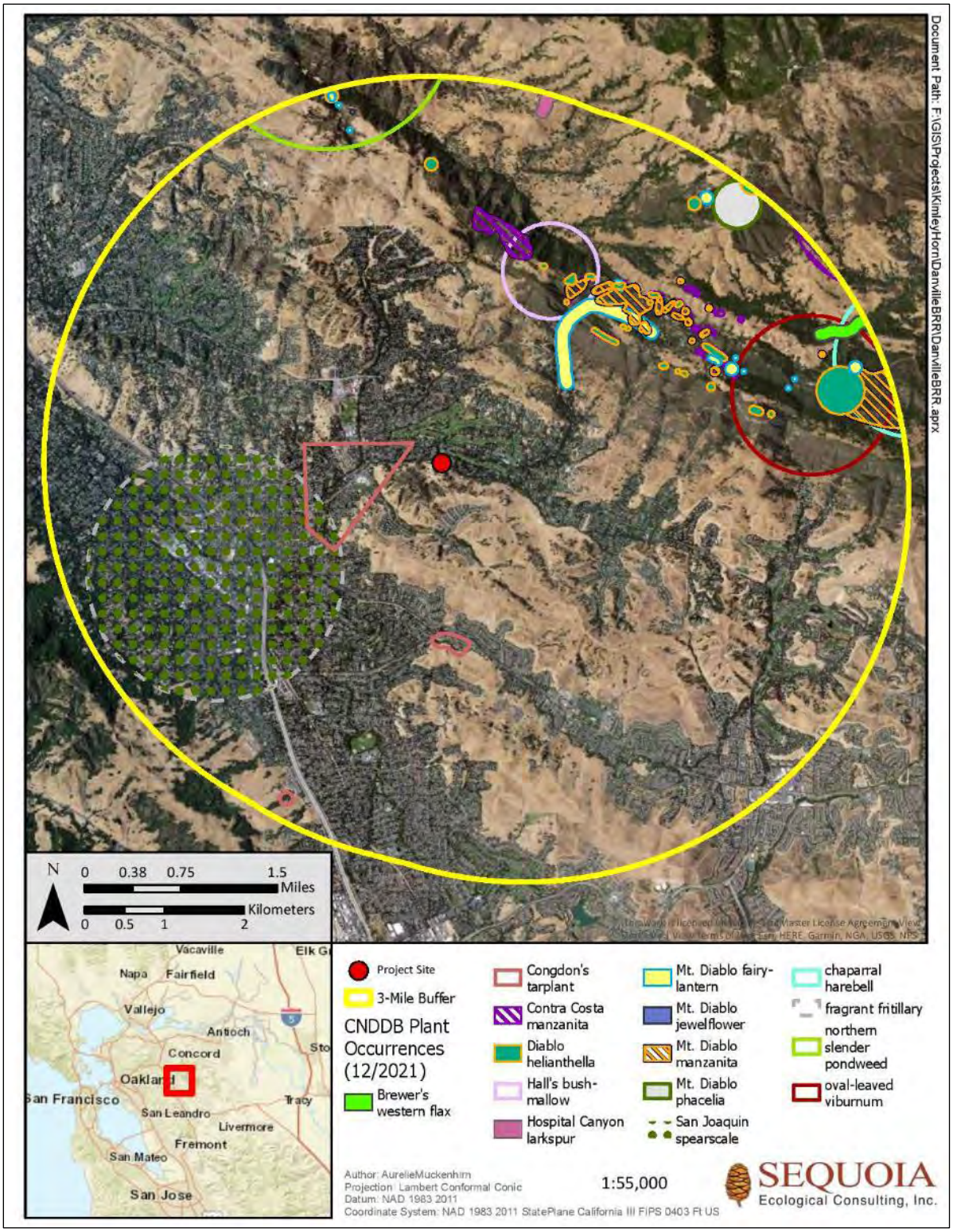

Figure 5. Closest Known Records for Special-Status Plant Species Within 3 Miles of the Diablo Road Trail Project Site.

Table 1. Special-Status Plant Species with Potential to Occur on the Diablo Road Trail Project Site.

Scientific Name	Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Arctostaphylos auriculata	Mt. Diablo manzanita	1B.3	Occurs in sandstone chaparral and cismontane woodland at elevations of 440 to 2,135 feet MSL. Blooms from January through March.	None. no suitable habitat occurs on the Project site.
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	1B.2	Occurs in rocky chaparral at elevations of 1,410 to 3,610 feet MSL. Blooms from January through March.	None. no suitable habitat occurs on the Project site.
Calochortus pulchellus	Mt. Diablo fairy lantern	1B.2	Occurs in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland at elevations of 95 to 2,755 feet MSL. Blooms from April through June.	None. No suitable habitat occurs on the Project site.
Campanula exigua	chaparral harebell	1B.2	Occurs in rocky, usually serpentinite soils within chaparral at elevations of 900 to 4,100 feet MSL. Blooms from May through June.	None. No suitable habitat occurs on the Project site.
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	1B.1	Occurs in valley and foothill grassland at elevations of 0 to 754 feet. Blooms from May through October.	None. No suitable habitat occurs on the Project site.
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur	1B.2	Occurs in chaparral, cismontane woodland, and coastal scrub. Blooms from April through June.	None. No suitable habitat occurs on the Project site.
Dirca occidentalis	western leatherwood	1B.2	Occurs in mesic soils within Broad leafed upland forest, closed cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland at elevations of 80 to 1,395 feet MSL. Blooms from January through March.	None. No suitable habitat occurs on the Project site.
Eriogonum truncatum	Mt. Diablo buckwheat	1B.1	Occurs in sandy soils in within chaparral, coastal scrub, and valley and foothill grassland at elevations of 5 to 1,150 feet MSL. Blooms from April through September.	None. No suitable habitat occurs on the Project site.
Eryngium jepsonii	Jepson's coyote thistle	1B.2	Occurs in clay soils within valley and foothill grassland and vernal pools at elevations of 5 to 985 feet MSL. Blooms from April through August.	None. No suitable habitat occurs on the Project site.
Extriplex joaquinana	San Joaquin spearscale	1B.2	Occurs in alkaline soils within chenopod scrub, meadows and seeps, playas as well as valley and foothill grassland at elevations of 3 to 2,739	None. No suitable habitat occurs on the Project site.

Scientific Name	Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
			feet. Blooms from April through October.	
Fritillaria liliacea	fragrant fritillary	1B.1	Often occurs in serpentinite soils within cismontane woodland, coastal prairie, coastal scrub and valley and foothill grassland at elevations of 10 to 1,345 feet. Blooms from February through April.	None. No suitable habitat occurs on the Project site.
Hesperolinon breweri	Brewer's western flax	1B.2	Occurs in chaparral, cismontane woodland and valley and foothill grassland, usually serpentinite soils, at elevations of 95 to 3,100 feet MSL. Blooms from May through July.	None. No suitable habitat occurs on the Project site.
Malacothamnus hallii	Hall's bushmallow	1B.2	Occurs in chaparral and coastal scrub at elevations of 30 to 2,495 feet MSL. Blooms from May through September.	None. No suitable habitat occurs on the Project site.
Monolopia gracilens	woodland wooly threads	1B.2	Occurs in serpentinite soils within broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), and valley and foothill grassland at elevation of 325 to 3,935 feet MSL. Blooms from March through July.	None. No suitable habitat occurs on the Project site.
Navarretia nigelliformis ssp. *radians*	shining navarretia	1B.3	Occurs in cismontane woodland, valley and foothill grassland, and vernal pools, sometimes in clay soils, at elevations of 210 to 3,280 feet MSL. Blooms from April through July.	None. No suitable habitat occurs on the Project site.
Phacelia phacelioides	Mt. Diablo phacelia	1B.2	Occurs in rocky areas, chaparral, and cismontane woodland. Blooms from April through May.	None. No suitable habitat occurs on the Project site.
Sanicula saxatilis	rock sanicle	1B.2, CR	Occurs in rocky, scree, talus within broadleafed upland forest, chaparral, and valley and foothill grassland at elevations of 2,030 to 3,855 feet MSL. Blooms from April through May.	None. No suitable habitat occurs on the Project site.
Strepthanthus hispidus	Mt. Diablo jewelflower	1B.3	Occurs in chaparral, rocky areas, valley and foothill grasslands. Blooms from March through June.	None. No suitable habitat occurs on the Project site.
Stuckenia filiformis ssp. *aplina*	northern slender pondweed	2B.2	Occurs in marshes and swamps (assorted shallow freshwater). Blooms from May through July.	None. No suitable habitat occurs on the Project site.
Triquetrella californica	coastal triquetrella	1B.2	Occurs in coastal bluff scrub and coastal scrub at elevations of 30 to 330 feet MSL.	None. No suitable habitat occurs on the Project site.

Scientific Name	Common Name	Listed Status	Habitat Requirements	Potential for Occurrence
Viburnum ellipticum	oval-leaved viburnum	2B.3	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest at elevations of 705 to 4,595 feet. Blooms from May through June.	None. No suitable habitat occurs on the Project site.

Key to status:
FT=Federally listed as threatened species
CE=California listed as endangered species
CNPS Rare Plant Rank
1A=Plants presumed extirpated in California, and either rare or extinct elsewhere
1B=Pants rare, threatened, or endangered in California, or elsewhere
2A=Plants presumed extirpated in California but common elsewhere
2B=Plants rare, threatened, or endangered in California but more common elsewhere
3=Plants about which more information is needed
Note: CNPS ranks below 3 were excluded from this analysis.

6.2.6 Special-Status Animals

Figure 6 provides a graphical illustration for special-status animal species occurrences within 3 miles of the Project site. Table 3 provides an assessment of potential to occur for special-status animal species on the Project site. Eleven (11) special-status animal species have been previously documented (CNDDB occurrences) within 3 miles. Sequoia analyzed the potential to occur for these species, as well as species included in Calfish, Pisces, NMFS, and IPaC resource lists during the desktop review (Table 3). A number of these species require specialized habitat, such as vernal pools, rocky streams, and scrub, that are not found on the Project site.

Due to lack of suitable habitat and/or lack of recent occurrences in the Project vicinity, six (6) special-status animal species are not expected to occur and are therefore not discussed further in this analysis. These six species are San Joaquin kit fox (*Vulpes macrotis mutica*), California least tern (*Sterna antillarum browni*), California tiger salamander, Alameda whipsnake, delta smelt (*Hypomesus transpacificus*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Descriptions and potential for occurrence of the remaining five (5) species are provided in more detail below (Table 2, Figure 6).

6.2.6.1 Pallid Bat

The pallid bat (*Antrozous pallidus*) is designated as a California Species of Special Concern and a Medium Priority species by the Western Bat Working Group (CDFW 2021). The pallid bat is a relatively large, light-colored bat ranging throughout the western North America from interior British Columbia to Mexico (Hermanson and O'Shea 1983, Sherwin and Rambaldini 2005). They inhabit foothills and lowlands near water throughout California below 6,560 feet in elevation, but are most abundant in arid deserts and grasslands, particularly in areas with rock outcrops near water (Hermanson and O'Shea 1983). Pallid bats typically live in small groups in a variety of day and night roosts including bridges, buildings, tree hollows in coast redwoods, bole cavities in oaks, exfoliating bark, rock crevices in

outcrops and cliffs, caves, and mines (Sherwin and Rambaldini 2005). Roost sites may change seasonally and are typically reused for a few days to weeks. Pallid bats primarily feed on a variety of arthropods by capturing prey on the ground or gleaning from surfaces near the ground. Parturition varies with latitude, but generally occurs from late April to August; maternal colonies disperse by October (Hermanson and O'Shea 1983). Overwintering is common along the California coast, but individuals may migrate short distances between winter and summer roosts (Sherwin and Rambaldini 2005).

Two occurrences of pallid bat are known within 3 miles of the Project site; the nearest occurrence dates to 1991 and is located approximately 1.8 miles west (CNDDB Occurrence No. 134; Figure 6). Trees on the Project site provide marginally suitable roosting habitat. **As such, until preconstruction surveys are conducted that confirm or negate this species' presence on the Project site, impacts to pallid bat would be a potentially significant impact pursuant to the CEQA.** If pallid bats are identified roosting on or immediately adjacent to the Project site, mitigation measures will be implemented (see Impacts Analysis section).

6.2.6.2 Townsend's Big-eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is designated as a California Species of Special Concern and High Priority species by the Western Bat Working Group (CDFW 2021). The Townsend's big-eared bat is an uncommon resident throughout California, inhabiting mesic environments. The species is a moth specialist and typically roosts in cavities measuring 16 inches in diameter or greater (pers. comm. Dave Wyatt) in caves, mines, bridges, building, rock crevices, tree hollows in coastal lowlands, and cultivated valleys and nearby hills characterized by mixed vegetation below 11,000. Townsend's big-eared bats exhibit a high site fidelity and are highly sensitive to disturbance. They forage by gleaning insects from trees and shrubs along edge habitats near water. Foraging bouts peak in late evening and may span long distances. Winter hibernacula are used from October to April.

The closest known occurrence of Townsend's big-eared bat is located approximately 2.2 miles north of the Project site (CNDDB Occurrence No. 423; Figure 6); this observation is historical and occurred in 1926. Trees on the Project site provide marginally suitable roosting habitat. **As such, until preconstruction surveys are conducted that confirm or negate this species' presence on the Project site, impacts to Townsend's big-eared bat would be potentially significant pursuant to the CEQA.** If Townsend's big-eared bats are identified roosting on or immediately adjacent to the Project site, mitigation measures will be implemented (see Impacts Analysis section).

6.2.4.3 Foothill Yellow-Legged Frog

The foothill yellow-legged frog is divided into five distinct clades in California based on genetic divergence and conservation concern (CDFW 2021). The northwest/north coast clade is the most intact population and is designated as a California Species of Special Concern. Historically, foothill yellow-legged frog occurred from west of the crest of the Cascade Mountains in Oregon south to the Transverse Ranges in Los Angeles County, and in the Sierra Nevada foothills south to Kern County

(Zweifel 1955; Stebbins 2012). The current range now excludes coastal areas south of northern San Luis Obispo County and foothill areas south of Fresno County, where the species is considered extirpated (Jennings and Hayes 1994). In a 1994 report (Fellers 1994), healthy, reproducing populations were reported in suitable habitat throughout the Diablo Range in Alameda, western Stanislaus, Santa Clara, San Benito, and western Fresno counties. Foothill yellow-legged frog are found in or near rocky streams in a variety of habitats, including valley foothill hardwood, valley-foothill riparian, coastal scrub, mixed conifer, mixed chaparral, and wet meadows (Zeiner et al. 1988). This species and aquatic habitat are considered sympatric, and foothill yellow-legged frog rarely migrate far from perennial or intermittent streams (Stebbins 2012). The foothill yellow-legged frog requires shallow, flowing water in small to moderate-sized streams containing some cobble-sized substrate and portions of open canopy important for basking (Hayes and Jennings 1988; Jennings 1988; Bourque 2008). It deposits its egg masses on the downstream side of cobbles and boulders over which a relatively thin, gentle flow of water exists (Storer 1925; Fitch 1936; Zweifel 1955; Kupferberg 1996).

The foothill yellow-legged frog is known from one CNDDB occurrence within 3 miles of the Project site. The closest occurrence is located 2.3 miles to the north of the Project site (CNDDB Occurrence No. 2128; Figure 6); this observation occurred in 1953. Although potentially suitable habitat occurs adjacent to the Project site within East Branch Green Valley Creek, no suitable breeding or over-summering habitat occurs on the Project site and Diablo Road and its shoulder where the Project is located do not provide suitable migration/dispersal habitat. **Accordingly, no impacts to foothill yellow-legged frog are anticipated from the proposed Project.**

6.2.4.4 California Red-Legged Frog

The California red-legged frog was listed as a federally threatened species on May 23, 1996 (USFWS 1996; 61 FR 25813), and is designated as a California Species of Special Concern (CDFW 2021). A recovery plan was published for the California red-legged frog on September 12, 2002 (USFWS 2002). Critical habitat was designated for this species on April 13, 2006, and revisions to the critical habitat designation were published on March 17, 2010. The Project site is not located within critical habitat for this species.

The California red-legged frog is distributed throughout 26 counties in California, but is most abundant in the San Francisco Bay Area (USFWS 2017b). Populations have become isolated in the Sierra Nevada, northern coast, and northern Transverse Ranges (Jennings and Hayes 1994, Stebbins 2012). The species is believed to be extinct from the southern Transverse and Peninsular ranges, but is still present in Baja California, Mexico (USFWS 2017c). California red-legged frogs predominantly inhabit permanent water sources such as streams, lakes, marshes, natural and man-made ponds, and ephemeral drainages in valley bottoms and foothills up to 4,900 feet MSL (Jennings and Hayes 1994, Bulger et al. 2003, Stebbins 2012). Adults breed in a variety of aquatic habitats, while larvae and metamorphs use streams, deep pools, backwaters of streams and creeks, ponds, marshes, sag ponds, dune ponds, and lagoons. Stock ponds are frequently used for breeding when they provide a suitable hydroperiod, pond structure, and

vegetative cover, and are managed to control non-native predators such as bullfrogs and exotic fish. Breeding occurs between November and April within still or slow-moving water with light to dense, riparian or emergent vegetation, such as cattails (*Typha* spp.), tules (*Scirpus* spp.), or overhanging willows (*Salix* spp.) (Hayes and Jennings 1988). Egg masses are attached to vegetation below the surface and hatch after 6 to 14 days (Storer 1925, Jennings and Hayes 1994). Larvae undergo metamorphosis 3.5 to 7 months following hatching and reach sexual maturity at 2 to 3 years of age (Jennings and Hayes 1984, 1994). During the dry season, California red-legged frogs may use refugia in upland habitat, such as small mammal burrows or adjacent moist vegetation (USFWS 2002).

Tatarian (2008) noted that 57 percent of frogs fitted with radio transmitters in the Round Valley of eastern Contra Costa County stayed at their breeding pools, whereas 43 percent moved into adjacent upland habitat or to other aquatic sites. This study reported a peak of seasonal terrestrial movement in the fall months corresponding to 0.2 inches of precipitation that tapered off into spring. Upland movement activities ranged from 3 to 233 feet, averaging 80 feet, and were associated with a variety of refugia, including ground squirrel burrows at the bases of trees or rocks, logs, grass thatch, crevices, cow hoof prints, and a downed barn door; others were associated with upland sites lacking refugia (Tatarian 2008). The majority of terrestrial movements lasted from 1 to 4 days; however, one female was reported to remain in upland habitat for 50 days (Tatarian 2008). Uplands closer to aquatic sites were more often used and were more commonly associated with areas exhibiting higher object cover (e.g., small woody debris, rocks, and vegetative cover). Most frogs move away from breeding ponds to upland areas. The distance moved is site dependent, though one recent study shows that only a few frogs move farther than the nearest suitable nonbreeding habitat (Fellers and Kleeman 2007). In this Marin County study, the farthest distance traveled was 0.87 miles and most dispersing frogs moved through grazed pastures to reach the nearest riparian habitat (Fellers and Kleeman 2007). Bulger et al. (2003) did not observe habitat preferences among frogs moving between ponds. They did note that when breeding ponds dry, California red-legged frogs use moist microhabitats of dense shrubs and herbaceous vegetation within approximately 330 feet of ponds.

The California red-legged frog is known from five CNDDB occurrences within 3 miles of the Project site; the closest occurrence dates to 2004 and is located 0.03 miles north of the Project site in East Branch Green Valley Creek (CNDDB Occurrence No. 817; Figure 6). Although potentially suitable habitat occurs adjacent to the Project site within East Branch Green Valley Creek, no suitable breeding or over-summering habitat occurs on the Project site and Diablo Road and its shoulder where the Project is located do not provide suitable migration/dispersal habitat. Additionally, Diablo Road provides a heavily trafficked barrier between the closest known occurrence and the Project site. **Accordingly, no impacts to California red-legged frog are anticipated from the proposed project.**

6.2.4.5 Western Pond Turtle

The western pond turtle, a California Species of Special Concern (CDFW 2021), is the only freshwater turtle native to greater California and is distributed along much of the western coast, from the Puget Sound in Washington south to the Baja Peninsula, Mexico (Storer 1930). Overall, western pond turtles are habitat generalists, and have been observed in slow-moving rivers and streams (e.g., in oxbows), lakes, reservoirs, permanent and ephemeral wetlands, stock ponds, and sewage treatment plants. They prefer aquatic habitat with refugia, such as undercut banks and submerged vegetation (Holland 1994), and require emergent basking sites, such as mud banks, rocks, logs, and root wads to thermoregulate their body temperature (Holland 1994, Bash 1999). Pond turtles are omnivorous and feed on a variety of aquatic and terrestrial invertebrates, fish, amphibians and aquatic plants.

Western pond turtles regularly utilize upland terrestrial habitats, most often during the summer and winter, especially for oviposition (females), overwintering, seasonal terrestrial habitat use, and overland dispersal (Reese 1996, Holland 1994). Females have been reported ranging as far as 1,640 feet from a watercourse to find suitable nesting habitat (Reese and Welsh 1997). Nest sites are most often situated on south- or west-facing slopes, are sparsely vegetated with short grasses or forbs, and are scraped in sands or hard-packed, dry silt or clay soils (Holland 1994, Rathbun et al. 1992, Holte 1998, Reese and Welsh 1997). Western pond turtles exhibit high site fidelity, returning in sequential years to the same terrestrial site to nest or overwinter (Reese 1996).

Females in southern and central California lay their clutch as early as late April to late July, although they predominantly lay in June and July. In the early morning or late afternoon, gravid females leave the water and move upland to nest (Holland 1994). Natural incubation times vary, ranging from 80 to 100+ days in California. In northern California and Oregon, hatchlings remain in the nest after hatching and overwinter, emerging in the spring. In southern and central California, those that do not overwinter emerge from the nest in the early fall (Holland 1994).

The western pond turtle is known from one CNDDB occurrence within 3 miles of the Project site; this 2006 occurrence is located approximately 2.47 miles north of the Project site (CNDDB Occurrence No. 326; Figure 6). Although suitable habitat occurs adjacent to the Project site within East Branch Green Valley Creek, no suitable basking, foraging, and/or migration/dispersal habitat occurs on the Project site. **Accordingly, no impacts to western pond turtle are anticipated from the proposed Project.**

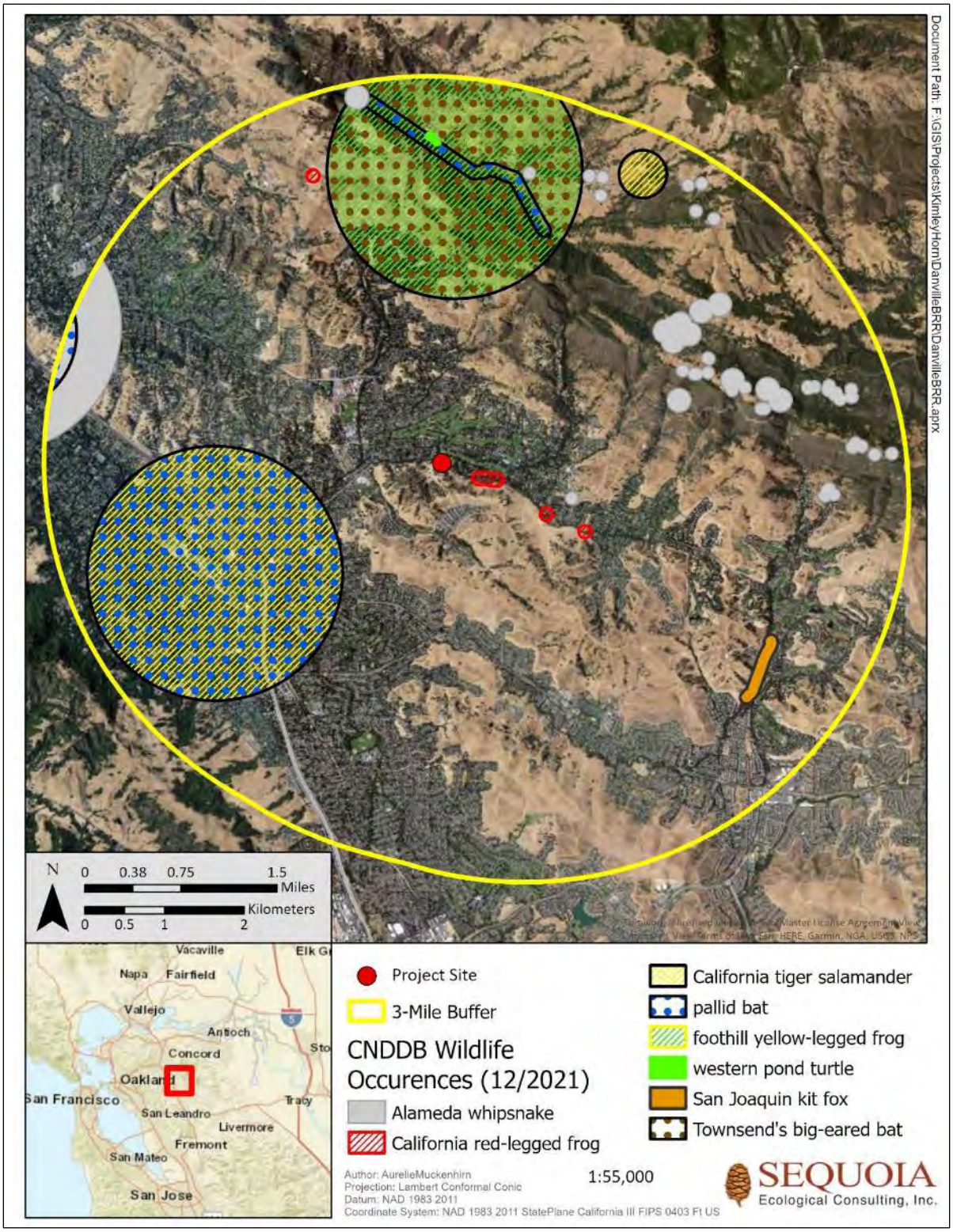

Figure 6. Closest Known Records for Special-Status Wildlife Species Within 3 Miles of the Diablo Road Trail Project Site.

Table 2. Special-Status Animal Species with Potential to Occur on the Diablo Road Trail Project Site.

Scientific Name	Common Name	Listed Status	Habitat Requirements	Potential for Occurrences
Mammals				
Antrozous pallidus	pallid bat	SSC	Occurs in deserts, grasslands, shrublands, woodlands, and forest. Most common in open, dry, habitats with rocky area for roosting. Roost must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Unlikely. Marginal roosting habitat occurs on the Project site. Preconstruction surveys will be conducted; see text.
Corynorhinus townsendii	Townsend's big-eared bat	SSC	Have been found in a diverse array of communities, including but not limited to, evergreen forests, mixed riparian forests, agricultural areas and coastal habitats. Distribution is most strongly correlated with proximity to roosting habitats in rock cavities and caves.	Unlikely. Low potential to forage within Project site. Preconstruction surveys will be conducted; see text.
Vulpes macrotis mutica	San Joaquin kit fox	FE, CT	Occurs in annual grasslands or open stages with scattered shrubby vegetation. Requires loose sandy textured soils for burrowing.	None. No suitable habitat occurs on the Project site.
Birds				
Sterna antillarum browni	California least tern	FE, CE, FP	Occurs and nests along coastal, sandy, open areas usually around bays, estuaries, and creek and river mouths.	None. No suitable habitat occurs on the Project site.
Amphibians/Reptiles				
Ambystoma californiense	California tiger salamander	FT, CT, SSC	Occurs in vernal and seasonal pools and associated grasslands, oak savanna, woodland, and coastal scrub. Needs underground refuges (i.e., small mammal burrows, pipes) in upland areas such as grassland and scrub habitats.	None. No suitable habitat occurs on the Project site.
Rana draytonii	California red-legged frog	FT, SSC	Occurs in semi-permanent or permanent water at least two feet deep, bordered by emergent or riparian vegetation, and upland grassland, forest, or scrub habitats for aestivation and dispersal.	None. No suitable habitat occurs on the Project site.

Scientific Name	Common Name	Listed Status	Habitat Requirements	Potential for Occurrences
Emys marmorata	western pond turtle	SSC	Occurs in rivers, ponds, and freshwater marshes, and nests in upland areas (sandy banks or grassy open fields) up to 1,640 feet from water.	None. No suitable habitat occurs on the Project site.
Masticophis lateralis erymanthus	Alameda whipsnake	FT, CT	A fast-moving, diurnal predator; actively hunts with head held high. Limited range, mostly in Alameda and Contra Costa counties, utilizing chaparral, scrub, and rocky outcrops as core habitat. Also uses surrounding woodlands and grassland for foraging and dispersal.	None. No suitable habitat occurs on the Project site.
Rana boylii	foothill yellow-legged frog	west/central coast clade: CE	Found in rocky streams and rivers with rocky substrate and open, sunny banks in forests, woodlands, and chaparral. May also occur in isolated pools and vegetated backwaters.	None. No suitable habitat occurs on the Project site.
Fish				
Hypomesus transpacificus	delta smelt	FT, CE	Endemic to Sacramento-San Joaquin Delta and its tributaries extending west to Suisun and San Pablo bays.	None. No suitable habitat occurs on the Project site.
Invertebrates				
Branchinecta lynchi	vernal pool fairy shrimp	FT	Occurs in vernal pools. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains.	None. No suitable habitat occurs on the Project site.

FE=Federally listed as endangered species
FT=Federally listed as threatened species
FC=Federally listed as a candidate species for listing
CE=California listed as endangered species
CT=California listed as threatened species
FP=California listed as fully protected
SSC=California species of special concern

Table 3. Plant Species Observed on the Diablo Road Trail Project Site.

Scientific Name	Common Name	Family Name	Native?
Aesculus californica	California buckeye	Sapindaceae	Yes
Artemisia douglasiana	California mugwort	Asteraceae	Yes
Baccharis pilularis	coyote brush	Asteraceae	Yes
Bromus diandrus	ripgut brome	Poaceae	No
Carduus pycnocephalus	Italian thistle	Asteraceae	No
Centaurea solstitialis	yellow star thistle	Asteraceae	No
Cirsium vulgare	bull thistle	Asteraceae	No
Conium maculatum	poison hemlock	Apiaceae	No
Erodium sp.	filaree	Geraniaceae	No
Eucalyptus sp.	eucalyptus	Myrtaceae	No
Festuca perennis	Italian ryegrass	Poaceae	No
Galium aparine	cleavers	Rubiaceae	Yes
Geranium dissectum	cutleaf geranium	Geraniaceae	No
Heteromeles arbutifolia	toyon	Rosaceae	Yes
Hirschfeldia incana	summer mustard	Brassicaceae	No
Hordeum brachyantherum	meadow barley	Poaceae	Yes
Hordeum murinum	foxtail barley	Poaceae	Yes
Juglans californica	California black walnut	Juglandaceae	Yes
Medicago polymorpha	California burclover	Fabaceae	Yes
Nasturtium gambelii	Gambel's yellowcress	Brassicaceae	Yes
Olea europaea	European olive	Oleaceae	No
Prunus sp.	plum	Rosaceae	-
Quercus agrifolia	coast live oak	Fagaceae	Yes
Quercus lobata	valley oak	Fagaceae	Yes
Rumex crispus	curly dock	Polygonaceae	Yes
Sambucus sp.	elderberry	Adoxaceae	-
Silybum marianum	milk thistle	Asteraceae	No
Symphoricarpos sp.	snowberry	Caprifoliaceae	Yes
Toxicodendron diversilobum	poison oak	Anacardiaceae	Yes
Trifolium sp.	clover	Fabaceae	-
Typha angustifolia	narrow leaf cattail	Typhaceae	Yes
Urtica dioica	stinging nettle	Urticaceae	Yes
Vicia sativa	spring vetch	Fabaceae	Yes
Vinca major	bigleaf periwinkle	Apocynaceae	No

Table 4. Wildlife Species Observed on the Diablo Road Trail Project Site.

Scientific Name	Common Name
Birds	
Agelaius phoeniceus	American crow
Aphelocoma californica	California scrub-jay
Baeolophus inornatus	oak titmouse
Buteo jamaicensis	red-tailed hawk
Cathartes aura	turkey vulture
Euphagus cyanocephalus	black phoebe
Junco hyemalis	dark-eyed junco
Melanerpes formicivorus	acorn woodpecker
Mimus polyglottos	northern mockingbird
Meleagris gallopavo	wild turkey
Passerella iliaca	fox sparrow
Mammals	
Otospermophilus beecheyi	California ground squirrel

7.0 DISCUSSION AND IMPACT ASSESSMENT

7.1 Significance Criteria

Pursuant to CEQA and CEQA Guidelines, direct and indirect adverse impacts to biological resources are classified as less than significant, potentially significant, or significant. According to CEQA Guideline § 21068, a significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment. According to CEQA Guideline § 15382, a significant effect on the environment is further defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. State, federal, and local jurisdictions and regulations are considered in the evaluation of significance of proposed actions.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c. Have 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?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

7.2 Impacts Analysis

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

No special-status plant species are expected to occur on the Project site due to regular disturbance (e.g., immediate proximity to busy thoroughfare, mowing, grazing) and lack of specialized habitats and/or substrates such species require. In addition, no special-status plant species were detected during surveys conducted in the spring and winter of 2021. The Project site may provide marginally suitable habitat for two special-status bat species, pallid bat and Townsend's big-eared bat. Furthermore, the Project site may provide suitable nesting habitat for migratory birds and raptors. **As such, until preconstruction surveys are conducted to confirm or negate presence on the Project site, impacts to special-status bats and nesting birds and raptors would be potentially significant pursuant to the CEQA.**

Level of Significance: Less than Significant with Mitigation Incorporated

7.2.1 Impact BIO-1: Nesting Birds and Special-Status Bats

Based on the database and literature review conducted during the desktop review for the proposed Project, 16 special-status animal species have been previously documented in the vicinity of the Project site (see Tables 2, Figure 6). Due to lack of suitable habitat and/or lack of recent occurrences in the vicinity of the Project site, six special-status animal species are not expected to occur and are not discussed further in this Report. These species are San Joaquin kit fox, California least tern, California tiger salamander, Alameda whipsnake, delta smelt, and vernal pool fairy shrimp. Potential constraints and proposed mitigations associated with each remaining resource with potential to occur on-site, including nesting migratory birds and raptors and roosting bats, are provided below.

Level of Significance before Mitigation: Potentially Significant

Mitigation Measures:

<u>BIO-1a: Migratory Birds and Raptors/Nest Avoidance</u>

Tree and vegetation clearing (removal, pruning, trimming, and mowing) shall be scheduled to occur outside the migratory bird nesting season (February 1 through August 31). However, if clearing and/or construction activities will occur during the migratory bird nesting season, then preconstruction surveys to identify active migratory bird and/or raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation on the Project site and within 300 feet (i.e., zone of influence) of

Project-related activities. The zone of influence includes areas outside the Project site where birds could be disturbed by construction-related noise or earth-moving vibrations.

If active nest, roost, or burrow sites are identified within the Project site, a no-disturbance buffer shall be established for all active nest sites prior to commencement of any proposed Project-related activities to avoid construction or access-related disturbances to migratory bird nesting activities. A no-disturbance buffer constitutes a zone in which proposed Project-related activities (e.g., vegetation removal, earth moving, and construction) cannot occur. A minimum buffer size of 50 feet for passerines and 300 feet for raptors will be implemented; sizes of the buffers shall be determined by a qualified biologist based on the species, activities proposed near the nest, and topographic and other visual barriers. Buffers shall remain in place until the young have departed the area or fledged and/or the nest is inactive, as determined by the qualified biologist. If work is required within a buffer zone of an active bird nest, work may occur under the supervision of a qualified avian biologist. The qualified avian biologist monitoring the construction work will have the authority to stop work and adjust buffers if any disturbance to nesting activity is observed.

BIO-1b: Roosting Bats

A qualified biologist shall be hired to conduct surveys for special-status bats (pallid bat and Townsend's big-eared bat) no more than two weeks prior to planned commencement of construction activities that have the potential to disturb bat day roosts or maternity roosts through elevated noise levels or removal of trees. If a visual survey is not sufficient to determine the presence/absence of bats, acoustic equipment (e.g., AnaBat) shall be used to determine potential occupancy type of species present. If an active maternity roost is detected, a qualified biologist shall determine an appropriate avoidance buffer to be maintained from April 1 until young are flying (typically through August). If an active day roost is detected in a tree or structure planned for removal, or within a zone of influence (i.e., noise, vibration) that could result in roost abandonment, as determined by a qualified biologist, the bats shall be safely evicted under the guidance of a qualified biologist. Day roosts shall not be removed unless the daytime temperature is at least 50 degrees Fahrenheit and there is no precipitation. Mitigation for day roosts impacted by the Project will be achieved through the installation of bat houses on-site to replace lost roosts at a 1:1 ratio. Replacement roosts will be placed at the discretion of the qualified biologist.

Level of Significance after Mitigation: Less than Significant

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

7.2.2 Impact BIO-2. Riparian Habitat and Waters of the United States/State

The bed, bank, and channel and associated riparian vegetation of East Branch Green Valley Creek are subject to CDFW jurisdiction under Section 1600 of CFGC. In addition, areas within the riparian corridor and below top-of-bank may be regulated by RWQCB. Accordingly, prior to any impacts to the bed, bank, and/or channel and associated riparian vegetation/canopy of East Branch Green Valley Creek, authorization from CDFW/RWQCB shall be required prior to project commencement. Impacts could be mitigated to a level considered less than significant.

Level of Significance: Less than Significant with Mitigation Incorporated

Mitigation Measures:

BIO-2a: Obtain CDFW Section 1600 Lake or Streambed Alteration Agreement

If project activities encroach on the riparian zone of East Branch Green Valley Creek, the Project proponent shall submit a Section 1600 Notification of Lake or Streambed Alteration application to CDFW. The Notification will include a description of impacts, including quantification of impacts to bed, bank, and channel, as well as individual trees, area and linear footage of riparian vegetation, and proposed mitigation for impacts.

It is likely that CDFW will require tree replacement mitigation compensation as a condition of the Lake or Streambed Alteration Agreement. Accordingly, the applicant proposes to mitigate for any impacts to native trees greater than 4 inches in diameter at breast height (DBH) via on-site replacement at a 3:1 (replacement to impacts) ratio. This tree replacement mitigation proposal to compensate for the project's potential encroachment into the riparian canopy will likely satisfy mitigation requirements stipulated by CDFW. In consideration of overall Project site aesthetics, replacement trees shall be planted near East Branch Green Valley Creek to contribute to the existing riparian canopy associated with this waterway.

The trees' health shall be monitored annually for 5 years by a qualified biologist or arborist and documented in annual monitoring reports. At the end of the 5-year monitoring period, at least 70 percent of planted trees shall be in good health. If survival is below 70 percent, additional trees shall be planted to bring the total number of planted trees up to 100 percent of the original number of trees planted. Irrigation and follow-up monitoring shall be established over an additional 3-year period following any replanting.

BIO-2b: Obtain RWQCB Waste Discharge Requirements Permit

If project activities encroach on areas, including the riparian zone and canopy of East Branch Green Valley Creek and below top-of-bank, or other areas potentially regulated by the RWQCB, the Project proponent shall submit a report of Waste Discharge in order to obtain WDRs and/or file a completed federal National Pollutant Discharge Elimination System (NPDES) permit application form with the San Francisco Bay RWQCB, as appropriate.

In addition, the Project proponent shall develop a SWPPP that will be submitted to the Town of Danville as a condition of project approval demonstrating BMPs that shall be installed/implemented prior to Project commencement. Stormwater protection and treatment measures shall be implemented to ensure that the proposed Project remains in compliance with the Porter-Cologne Act and that discharges of dredged or fill material do not enter waters of the State.

Level of Significance after Mitigation: Less than Significant

c. *Would the project have 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?*

Level of Significance: No Impact

d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

This Project site does not currently provide a movement corridor for any wildlife species, nor does it provide nursery sites for any species. the proposed Project will not impact fish or wildlife movement, movement corridors, or nursery sites.

Level of Significance: No Impact

e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Level of Significance: Less than Significant with Mitigation Incorporated

7.2.3 Impact BIO-3: Town of Danville Tree Preservation Ordinance

The Town of Danville's Tree Preservation Ordinance (Municipal Code, Section 32-79) requires acquisition of a Tree Removal Permit prior to removal of certain trees within the City Limits. These impacts could be mitigated to a level considered less than significant.

Level of Significance before Mitigation: Potentially Significant

Mitigation Measures:

BIO-3: Tree Protection

Trees on the Project site are subject to the Town of Danville's Tree Preservation Ordinance. If trees are slated for removal as part of the proposed Project, the Project developer's consulting arborist shall prepare an arborist report to ensure protected, heritage, and or memorial trees are identified and considered for preservation. At least 90 days prior to project initiation, a Tree Removal Application shall be submitted to the Town for review and for acquisition of a Tree Removal Permit, if required. The Town will consider the following criteria upon receipt of the application and prior to issuing a permit:

1. The condition of the tree with respect to its health, imminent danger of falling, proximity to existing structures, and interference with utility infrastructure;

2. The necessity to remove the tree to allow for the reasonable use, enjoyment, or development of the property;

3. The age and size of the protected tree with regard to the appropriate size of the area in which the tree is planted, and if removal would encourage healthy, more vigorous growth of other plant materials in the area;

4. Planning Commission may authorize removal if the tree is unreasonably adversely impacting the use of the property. Mitigation would be required;

5. The effect of the removal in relation to soil erosion and surface water flow;

6. The number of species, size, and location of other protected trees in the area and the effect of the removal as it pertains to shade, privacy between properties, and scenic beauty of the area;

7. Possible visual impacts within a Town-identified Major Ridgeline or Scenic Hillside Area.

To compensate for the removal of any trees protected by the Town of Danville's Tree Protection Ordinance, the Project developer shall ensure the protection (i.e., health and safety) of trees to be retained and provide mitigation for trees authorized by the Town for removal. Accordingly, the Project developer's consulting arborist shall calculate the total inches of diameter of Town-protected trees and submit that calculation to the Town's Planning Division for review. The Project developer shall be required to replace on-site the Town-protected trees to be removed

with a number, size, and appropriate species of trees (or approved alternate species) equal to the total inches of the diameter of the trees to be removed.

If tree mitigation planting cannot be accommodated on the Project site, mitigation may be handled through the Project developer's payment of an in-lieu fee, which shall be made payable to the Town of Danville. In-lieu mitigation funds received by the Town may be applied to an account chosen by the Town to allow the purchase and planting of trees (e.g., beautification trees) within the Town of Danville.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Level of Significance before Mitigation: No Impact

8.0 REFERENCES

Baldwin D.H, Goldman D.H., Keil D.J., Patterson R, Rosatti T.J., Wilken D.H. (ed.). 2012. The Jepson Manual Vascular Plants of California: Second Edition. University of California Press, Berkeley. 1568 pps.

Bash, J. S. 1999. The role of wood in the life cycle of western pond turtles (*Clemmys marmorata*). Unpublished final report to ELWD Systems, a division of Forest Concepts LLC. 14 pp.

Beier, P. and S. Loe. 1992. "In my experience.." a checklist for evaluating impacts to wildlife movement corridors. Wildlife Society Bulletin Vol. 20(4): 6.

Bourque, R.M. 2008. Spatial Ecology of an Inland Population of the Foothill Yellow-legged Frog (*Rana boylii*) in Tehama County, California. Master's Thesis. Humboldt State University.

Bulger, J.B., N.J. Scott Jr. and R. Seymour. 2003. Terrestrial Activity and Conservation of Adult California Red-Legged Frogs *Rana aurora draytonii* in Coastal Forests and Grasslands. Biological Conservation. Vol. 110: pp. 85-95.

Calfish. 2021. Calfish Tabular Data Query; [accessed 2021 December]. Website: https://www.calfish.org/DataandMaps/CalFishTabularData.aspx

California Natural Diversity Data Base (CNDDB). 2021. RareFind 5. Computer Printout for Special-Status Species Within a 3-Mile Radius of the Project Site. California Natural Heritage Division, California Department of Fish and Wildlife, Sacramento, CA.

California Native Plant Society (CNPS). 2001. Inventory of rare and endangered plants of California (Sixth Edition). Rare plant scientific advisory committee, David P. Tibor, convening editor. California Native Plant Society. Sacramento, CA. 338 pps.

California Native Plant Society (CNPS). Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California. Accessed 2021 December. Website: http://www.rareplants.cnps.org

California Department of Fish & Wildlife (CDFW). 2016. Complete list of amphibian, reptile, bird and mammal species in California. Published September 2008; updated May 2016.

California Department of Fish & Wildlife (CDFW). 2021. Special Animals List. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch. Updated October 2021.

Fellers, G.M., editor. 1994. California/Nevada declining amphibian working group. Newsletter 1, 1 May 1994. 10 pp.

Fellers, G.M., and P.M. Kleeman. 2007. California Red-Legged Frog (*Rana draytonii*) Movement and Habitat Use: Implications for Conservation. Journal of Herpetology 41:276–286.

Fitch, H.S. 1936. Amphibians and Reptiles of the Rogue River Basin, Oregon. American Midland Naturalist 17(3):634–652.

Google Earth Pro. 2021. 3D map, Buildings data layer; [accessed 2021 December]. Website: http://www.google.com/earth/index.html

Hayes, M.P. and M.R. Jennings. 1988. Habitat Correlates of Distribution of the California Red-legged Frog (*Rana aurora draytonii*) and the Foothill Yellow-Legged Frog (*Rana boylii*): Implications for Management. pp. 144-158 In: Szaro, Robert C., Kieth E. Severson and David R. Patton (technical coordinators). July 19-21, 1988. Proceedings of the symposium on the management of amphibians, reptiles and small mammals in North America. United States Department of Agriculture, Forest Service, General Technical Report (GTR)-166.

Hermanson, J.W., and T.J. O'Shea. 1983. *Antrozous pallidus*. Mammalian Species 213:1-8.

Holland, D.C. 1994. The western pond turtle: habitat and history. Portland, OR: U.S. Department of Energy, Bonneville Power Administration.

Holte, D. L. 1998. Nest site characteristics of the western pond turtle, *Clemmys marmorata*, at Fern Ridge Reservoir, in west central Oregon. MS Thesis, Oregon State University, Corvallis, Oregon.

Jennings, M.R., and M.P. Hayes. 1984. Pre-1900 Overharvest of the California Red-Legged Frog (*Rana aurora draytonii*): The Inducement for Bullfrog (*Rana catesbeiana*) Introduction. Herpetologica 41(1):94-103.

Jennings, M.R., M.P. Hayes, and Research Section, Animal Management Division, Metro Washington Park Zoo. 1994. Amphibian and Reptile Species of Special Concern in California. Final Report Submitted to the California Department of Fish & Game, Inland Fisheries Division. Rancho Cordova, CA. 255 pp. November 1.

Kupferberg, S.J. 1996. Hydrologic and geomorphic factors affecting conservation of a river-breeding frog (*Rana boylii*). Ecological Applications 6:1332–1344.

Natural Resource Conservation Service (NRCS). 2021a. Web Soil Survey. Website at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

Natural Resource Conservation Service (NRCS). 2021b. Lists of hydric soils. Website at: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

Rathbun, G. B., N. Seipel, and D. Holland. 1992. Nesting behavior and movements of western pond turtles. *Clemmys marmorata*. Southwest. Nat. 37(3):319-324.

Reese, D. A. 1996. Comparative demography and habitat use of western pond turtles in northern California: the effects of damming and related alterations. Dissertation, University of California at Berkeley, Berkeley, California, USA.

Reese, D.A.; Welsh, Hartwell H., Jr. 1997. Use of terrestrial habitat by western pond turtles (*Clemmys marmorata*): implications for management. Pages 352-357 in Proceedings: Conservation, Restoration, and Management of Turtles and Tortoises. An International Conference. New York Turtle and Tortoise Society.

Sherwin, R., and D.A. Rambaldini. 2005. Pallid Bat (*Antrozous pallidus*). Species Account. Western Bat Working Group. Website: http://wbwg.org/speciesinfo/species_accounts/species_accounts.html

Stebbins, R.C., and McGinnis, S.M. 2012. Field Guide to Amphibians and Reptiles of California. New York, NY: Houghton Mifflin Company.

Storer, T.I. 1925. A synopsis of the amphibia of California. University of California Publications in Zoology 27:1-342.

Storer, T. I. 1930. Notes on the range and life-history of the Pacific fresh-water turtle, *Clemmys marmorata*. Univ. Calif. Publ. Zool. 32:429-441.

Tatarian, P. J. 2008. Movement Patterns of California Red-Legged Frogs (*Rana Draytonii*) in an Inland California Environment. Herpetological Conservation and Biology 3(2):155-169. November.

U.S. Climate Data. 2021. [accessed 2021 December]. Website: https://www.usclimatedata.com/climate/walnut-creek/california/united-states/usca2120

U.S. Fish & Wildlife Service (USFWS). 1996. Sacramento Fish & Wildlife Office Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Prepared September 23, 1996. Endangered Species Information.

U.S. Fish & Wildlife Service (USFWS). 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. Viii + 173 pps.

U.S. Fish & Wildlife Service (USFWS). 2021a. Information for Planning and Consultation (IPaC); [accessed 2021 December]. Website: https://ecos.fws.gov/ipac/

U.S. Fish & Wildlife Service (USFWS). 2021b. Critical Habitat Portal; [accessed 2021 December]. Website: http://ecos.fws.gov/crithab

U.S. Fish & Wildlife Service (USFWS). 2021c. National Wetlands Inventory; [accessed 2021 December]. Website: https://www.fws.gov/wetlands/

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988. California's wildlife, volume I, amphibians and reptiles. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zweifel, R.G. 1955. Ecology, Distribution, and Systematics of Frogs of the *Rana boylii* Group: University of California Publications. Zoology 54(4):207–292.

Appendix A

Aquatic Resources Delineation Report

SEQUOIA
Ecological Consulting, Inc.

Aquatic Resources Delineation Report
Diablo Road Trail Project
Town of Danville, California

June 2022

Prepared on behalf of:

Town of Danville
510 La Gonda Way
Danville, CA 94526
(925) 314-3388

Prepared by:

Sequoia Ecological Consulting, Inc.
1342 Creekside Drive
Walnut Creek, CA 94596
(925) 855-5500
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APPENDICES

1.0 INTRODUCTION

On behalf of the Town of Danville (Applicant), Sequoia Ecological Consulting, Inc. (Sequoia) conducted a delineation of aquatic resources potentially regulated under section 404 of the federal Clean Water Act (CWA) and the State Water Resources Control Board (SWRCB) *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the* State, for the Town of Danville's Diablo Road Trail Project (Project). The proposed Project extends along Diablo Road between Fairway Drive to the west and Ave Nueva to the east in the Town of Danville, California (Figures 1 and 2). The "study area" for the aquatic resource delineation consisted of the entire alignment of the proposed Project and covers approximately 6.5 acres over approximately 0.9 miles along the southern shoulder of Diablo Road (Figure 1).

2.0 APPLICANT

Town of Danville
510 La Gonda Way
Danville, CA 94526
Contact: Nader Salama
Phone: (925) 314-3349

3.0 LOCATION AND SETTING

The proposed Project is located along Diablo Road in the Town of Danville, Contra Costa County, California, approximately 0.59-mile east of Interstate 680 and five miles from the western entrance of Mt. Diablo State Park (Figures 1 and 2). The Project site is located within private lands and winds along Diablo Road from the intersection of Fairway Drive to Blackhawk Road to the east. The Project site is located immediately north of East Branch Green Valley Creek, along the shoulder of Diablo Road and property belonging to the Magee Cattle Ranch, and south of single-family residential development. The Project site is characterized as highly disturbed, ruderal (weedy) habitat with overhanging mixed riparian woodland canopy and nonnative annual grassland. Consequently, due to the location of the Project site along the shoulder of a busy thoroughfare and the subsequent regular disturbance regime, native habitats on the Project site are absent.

The proposed Project consists of construction of an 8- to 10-foot-wide off-street paved multi-use trail along the southern shoulder of Diablo Road. This trail will connect the Diablo Road/Green Valley Road corridor to the west to Blackhawk Road/Mt. Diablo State Park south access to the east (Figure 2). Also included is a pedestrian and bicycle roadway crossing at the intersection of Diablo Road in the vicinity of Fairway Drive.

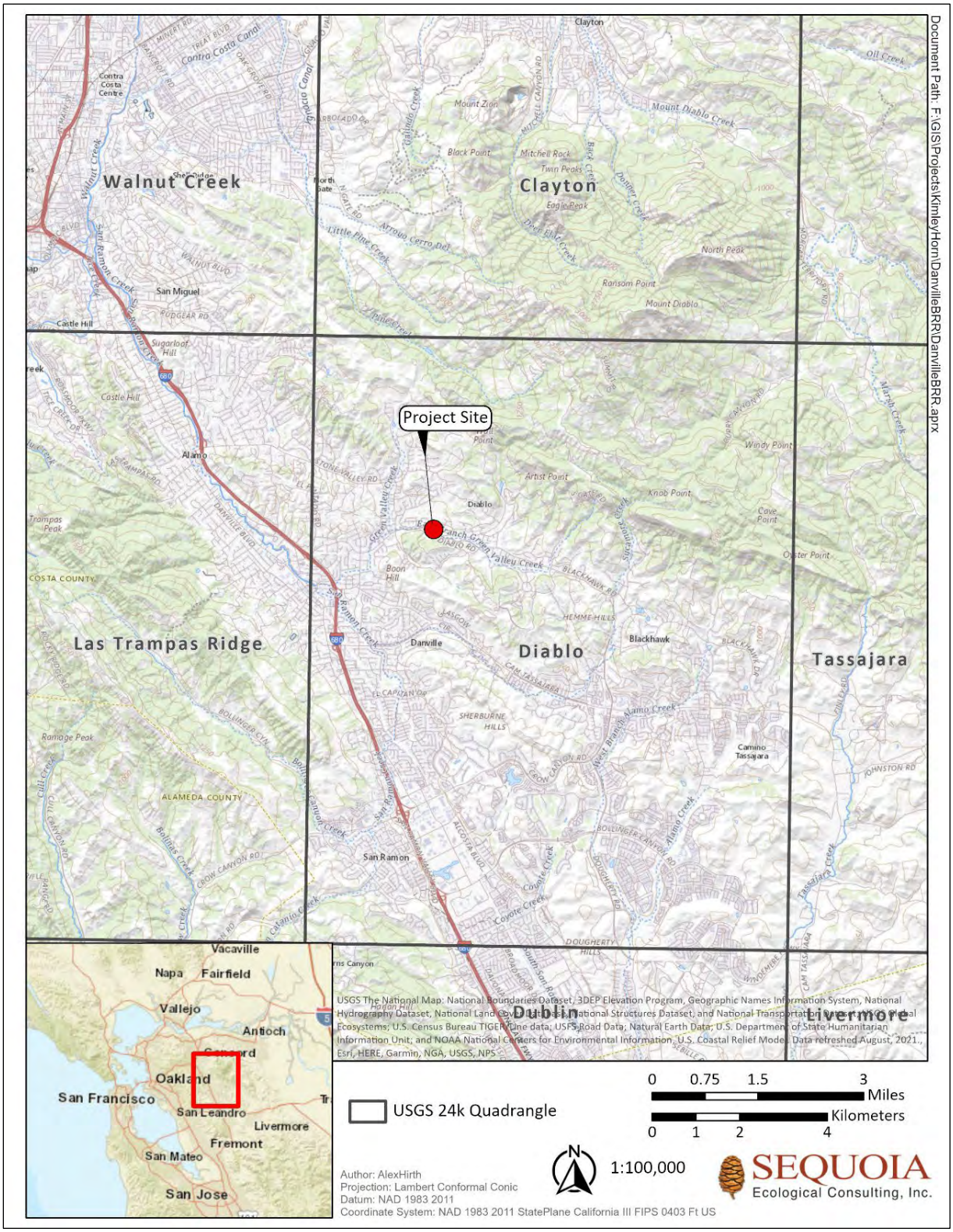


Figure 1. Regional Map of the Diablo Road Trail Project Site.

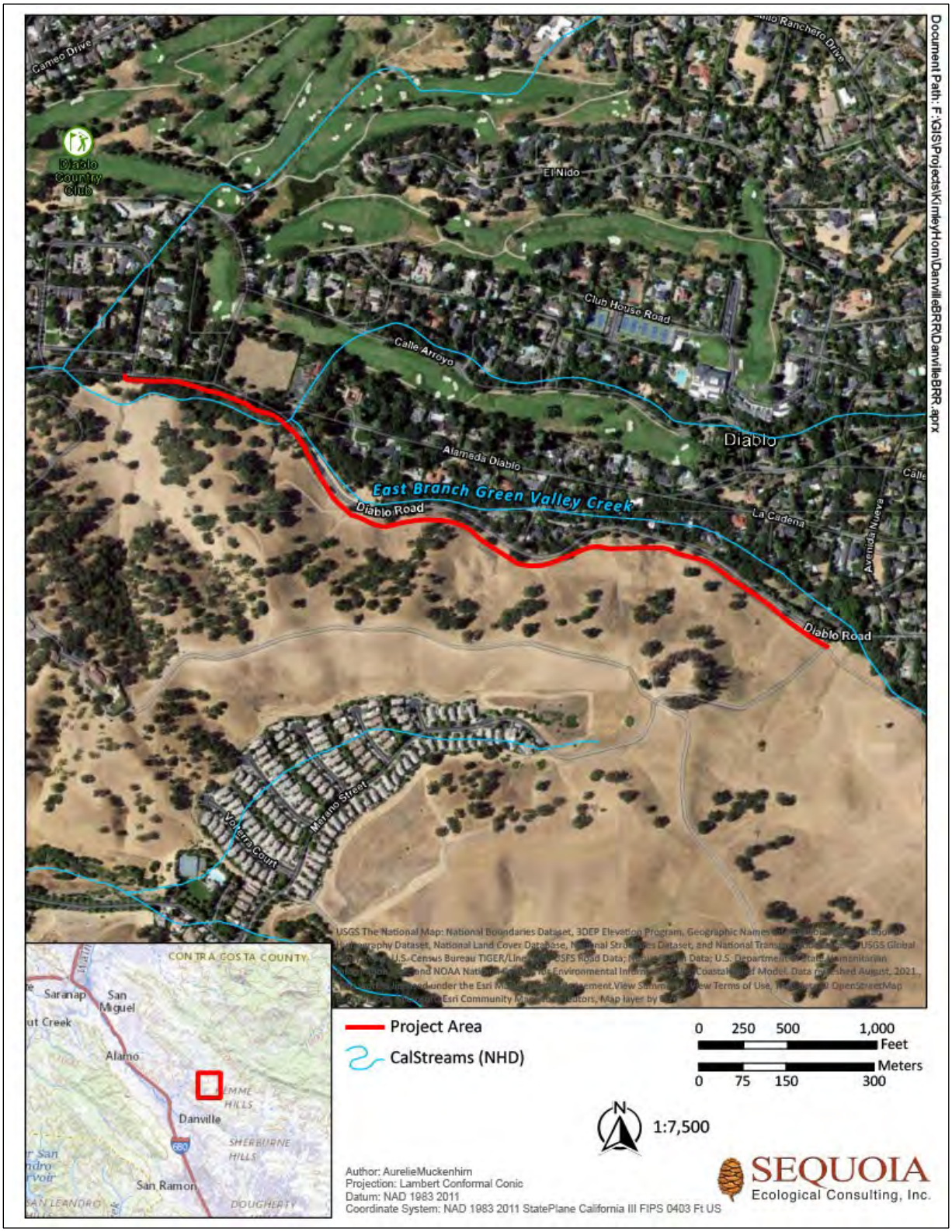


Figure 2. Location Map of the Diablo Road Trail Project Site.

4.0 WETLAND DELINEATION METHODS

Prior to the field delineation, available reference materials were reviewed, including the Natural Resources Conservation Service's (NRCS) Web Soil Survey (2021a), hydric soils lists (NRCS 2021b), the National Wetlands Inventory (NWI; USFWS 2021), National Hydrography Dataset (NHD; USGS 2021), geologic data (California Geological Survey 2010), topographic maps (USGS 2021), and aerial imagery. A routine-level aquatic resource delineation was conducted on the Project site on December 9, 2021.

The Project site was field checked for indicators of hydrophytic vegetation, wetland hydrology, and hydric soils. During the aquatic resource delineation, 12 sample points were taken on the study area and recorded on U.S. Army Corps of Engineers (USACE) data forms provided in the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Arid West Manual; USACE 2008). USACE data forms are included in Appendix A.

This aquatic resource delineation was conducted in accordance with the *Arid West Manual* and the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE Manual; Environmental Laboratory 1987). Based on the presence or absence of field indicators—including vegetation, hydrology, and soils—the limits of potential jurisdictional wetlands and other waters of the United States were determined.

In addition to potential jurisdictional wetlands, this study evaluated the presence of any waters of the United States other than wetlands potentially subject to jurisdiction under Section 404 of the CWA. "Other waters" are seasonal or perennial water bodies, such as lakes, stream channels, drainages, ponds, and other surface water features that exhibit an Ordinary High-Water Mark (OHWM) but lack positive indicators of one or more of the three wetland parameters (hydrophytic vegetation, wetland hydrology, hydric soils) (Federal Register 1994). In non-tidal "other waters," USACE jurisdiction extends to the OHWM, defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressions on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris" (Federal Register 1994; USACE 2005; 2008).

Potential jurisdictional wetlands and other waters were mapped with a Trimble GPS unit (sub-meter accuracy) and overlain on a digital orthophoto using ArcGIS mapping software (Appendix B).

5.0 WETLAND DELINEATION RESULTS

5.1 Topography and Hydrology

The eastern portion of the Project site features undulating topography located within regularly grazed non-native annual grassland. The topography generally slopes from south to north throughout this part of the site, with the Magee Cattle Ranch property upslope and Diablo Road downslope from the Project.

Water from sheet flow runoff and direct precipitation converges at topographic low points between multiple hill peaks, before being conveyed by swale- and drainage-like features. The extent of these features is limited to several swales and alluvial features that intersect with the Project site; however, several drainages with incised channels are present in the vicinity but fall outside of and upslope from the Project footprint, within the adjacent Magee Cattle Ranch property. The western portion of the Project site is located along the shoulder of Diablo Road and its topography is consistent with the road alignment. East Branch Green Valley Creek, a perennial waterway and blueline stream (Figure 2), lies directly south of the westernmost portion of the proposed Project.

A portion of East Branch Green Valley Creek (PW1) is located just outside the southern boundary of the Project site but within the study area; the extent of PW1 within the study area is approximately 0.689-acre (Appendix B). This feature is a perennial drainage characterized by a deeply incised channel, with a clearly defined bed and bank, and abrupt banks. The creek contained flowing water and in-channel pools at the time of the survey, and indicators of OHWM were observed.

5.2 Soils

Two soil types occur within the study area, as mapped by the NRCS (Figure 3). The mapped soil units are Cropley clay, 2 to 5 percent slopes and Botella clay loam, 0 to 2 percent slopes (NRCS 2021). Sequoia dug test pits dug at each sample site to confirm that soils were consistent with the descriptions provided by the NRCS. The mapped soil units are:

- Cropley clay, 2 to 5 percent slopes
- Botella clay loam, 0 to 2 percent slopes, MRLA 14

A total of 12 soil pits were dug by shovel to a maximum depth of 12 inches at locations representative of various hydrogeomorphic surface conditions (Sheet 1). Soil colors were characterized based on the Munsell Soil Book of Color (2012).

The soil colors in wetland positions across the study area were 10YR 2/1, 10YR 2/2, 10YR 3/2, and 10YR 4/2 with prominent redoximorphic features. Each soil sample was generally clay or loamy clay texture with many featuring intrusions or strata of sand. The upland positions were 10YR 3/2 and 10YR 3/3 with insufficient or absent redoximorphic features, and a high sand content.

Redoximorphic features (5YR 4/6, 5YR 5/6, and 7.5YR 4/4) were prominent throughout the wetland sample points and were seen at high enough concentrations to qualify for the Redox Dark Surface (F6) hydric soil indicator (Field Indicators of Hydric Soils in the United States). Additionally, criteria were met for the Depleted Matrix (F3) hydric soil indicator, as a matrix of 10YR 4/2 with redoximorphic features of 5YR 4/4) were observed at Sample 1B.

Soils observed in the sample pits within the study area are described on USACE wetland delineation data forms in Attachment B (Sheet 1). A soil map is provided as Figure 3.

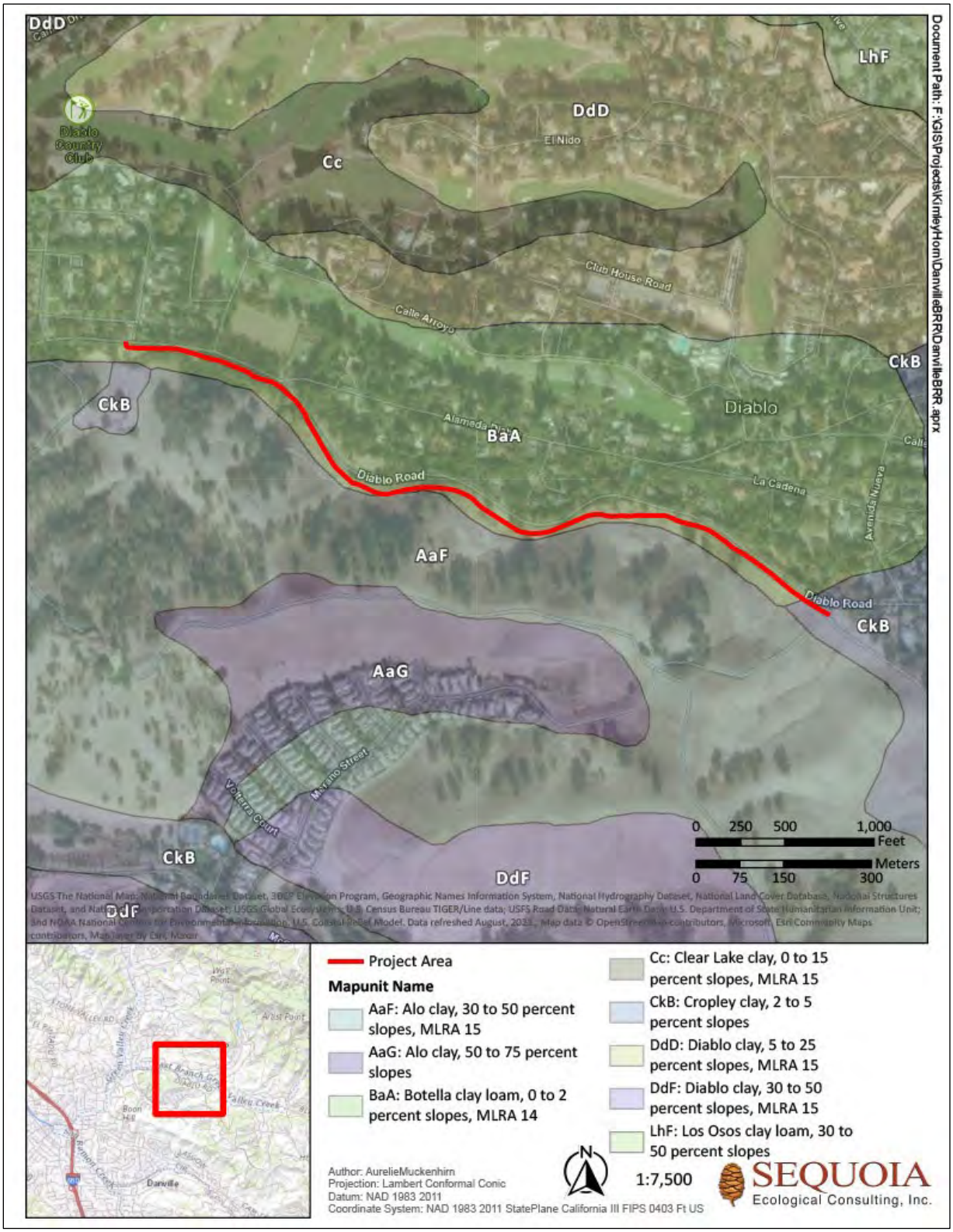


Figure 3. Soil Types on the Diablo Road Trail Project Site.

5.2.1 Cropley Clay, 2 to 5 Percent Slopes

The Cropley series consists of very deep, moderately well and well drained soils that formed in alluvium from mixed rock sources. They are found on alluvial fans, floodplains and in small basins. Slopes range from 0 to 15 percent. Vegetative cover consists of annual grasses and forbs. Elevations range from 10 to 2100-feet elevation. The mean annual rainfall is about 12 to 30-inches and the mean annual temperature is about 57 to 62 degrees F. Frost free season is 200 to 330 days and up to 360 days along the coast. The Alo, Altamont, Diablo, Antioch, Salinas and Sorrento soils are the main associated soils.

The surface layer is very dark gray clay 0 to 33 inches thick. The next layer is brown sandy clay loam 33 to 63 inches thick. It is slightly to moderately effervescent. Texture throughout the profile ranges from clay to silty clay loam but is clay in most places. The parent rock, at a depth of 24 to 48 inches is soft, calcareous, interbedded shale and medium-grained sandstone.

Cropley soils are used for irrigated row and truck crops, irrigated and dry pasture, apricots, prunes and for urban development. Vegetation in uncultivated or undeveloped areas is annual grasses and forbs with some scattered live oak. Cropley Clay, 2 to 5 percent slopes is not classified as a hydric soil by the NRCS.

5.2.2 Botella Clay Loam, 0 to 2 Percent Slopes, MRLA 14

The Botella series consists of very deep, well-drained soils that formed in alluvial material from sedimentary rocks. They are found on small valley bottoms and on alluvial fans. Slopes range from 0 to 15 percent. Vegetative cover consists of annual grasses and forbs. Elevations range from 50 to 2100-feet elevation. The mean annual rainfall is about 12 to 25-inches and the mean annual temperature is about 62 to 72 degrees F. Frost free season is 250 to 350 days. The Betteravia, Clear Lake, Crow Hill, Elder, Los Osos, Santa Lucia, and Zamora soils are the main associated soils.

The surface layer is very dark gray clay 0 to 33 inches thick. The next layer is brown sandy clay loam 33 to 63 inches thick. It is slightly to moderately effervescent. Texture throughout the profile ranges from clay to silty clay loam but is clay in most places. The parent rock, at a depth of 24 to 48 inches is soft, calcareous, interbedded shale and medium-grained sandstone.

Botella soils are used for growing field, forage, truck crops, and orchards and non-irrigated grain pasture, hay, and range. Some areas are used for urban development. Uncultivated areas have a cover of annual grasses and forbs with scattered oak trees and coastal sagebrush in some areas. Botella clay loam, 0 to 2 percent slopes, MRLA 14 is not classified as a hydric soil by the NRCS.

5.3 Vegetation

On December 9, 2021, Sequoia biologists surveyed the study area to characterize the vegetation communities and document plant species present within the study area. Nomenclature used for plant names follows *The Jepson Manual Second Edition* (Baldwin 2012). Habitat affinities were assigned

following the classification of Lichvar et.al (2014), as updated in 2016 and include the categories shown in Table 1 below.

Table 1. Wetland Plant Indicator Status.

Wetland Indicator Status	Definition
OBL – Obligate	Occur over 99% of the time in wetlands
FACW – Facultative	Occur 33 to 67% of the time in wetlands
FACU – Facultative Upland	Occur 1 to 33% of the time in wetlands
UPL - Upland	Occur less than 1% of the time in wetlands
NI – Non-Indicator	No classification given due to lack of information

Wetland indicator species (i.e., species that can tolerate soil saturation during grow period and/or prolonged inundation) are those classified as OBL, FACW, and FAC and listed in the *National Wetland Plant List* (USACE 2020).

Three (3) vegetation communities occur in the study area (Sawyer and Keeler-Wolf 1995) and are further described below.

5.3.1.1 Ruderal

Ruderal herbaceous habitat is prevalent within the study area. Ruderal communities are groupings of plants that thrive in areas disturbed by human activity. Ruderal vegetation is adapted to high levels of disturbance and endures for long periods of time in areas that have continual disturbance. Dominant grass and forb species observed within ruderal communities in the study area include black mustard (*Brassica nigra*), bristly ox-tongue (*Helminthotheca echioides*), California burclover (*Medicago polymorpha*), poison hemlock (*Conium maculatum*), and yellow star thistle (*Centaurea solstitialis*).

5.3.1.2 Non-native Annual Grassland

The study area is dominated by non-native annual grassland. This community is comprised primarily of plant species that mature in spring and early summer, before spreading seed and dying in late summer and fall. Non-native annual grassland is abundant within the study area, particularly in the eastern portion. Dominant grass and forb species observed within non-native annual grassland in the study area include slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*) Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), and filaree species (*Erodium botrys*, *E. cicutarium*).

5.3.1.3 Riparian Woodland

Riparian woodlands are diverse habitats that support numerous plant species that can include grasses, annual and perennial forbs, vines, shrubs, and trees. A variety of plants creates a complex layering of understory and overstory, which in turn provides habitat to numerous wildlife species. When found within the bed, channel, or bank of any river, stream, or lake, riparian vegetation is also protected under

Section §1602 of the California Fish and Game Code; and the California Department of Fish and Wildlife (CDFW) has included riparian communities in the California Natural Diversity Database.

Riparian woodland habitat is present within and surrounding Green Valley Creek (PD1), which flows through the western portion of the study area and just south of the Project site. Dominant plant species observed within riparian woodland communities on the Project site include Italian ryegrass (*Festuca perennis*), mugwort (*Artemisia douglasiana*), cattail (*Typha* sp.), giant reed (*Arundo donax*), mulefat, willows (*Salix exigua*, *S. laevigata*, and *S. losiolepis*), and Fremont cottonwood (*Populus fremontii*).

6.0 AGENCY JURISDICTION

One aquatic resources was identified on the study area during the December 2021 delineation: perennial drainage. Details on this aquatic resources is summarized in Table 2, and potential regulatory jurisdiction over this feature are discussed below.

Table 2. Potentially Jurisdictional Aquatic Resources Delineated in the Study Area.

Feature Name	Area (ft^2)	Length (ft)	Acre(s)	Avg Width (ft)	Sample Point	Bed/Bank /OHWM	Hydrology	Cowardin Class	Latitude, Longitude
Potential USACE and State Jurisdiction									
PD1	30,012	-	0.689	50	-	Yes, All	Perennial	Riverine	37.83480, -121.96689

6.1 Potential USACE Jurisdiction

On January 23, 2020, the Environmental Protection Agency (EPA) and the USACE finalized the Navigable Waters Protection Rule to define "waters of the U.S." The rule took effect on June 22, 2020. On August 30, 2021, the U.S. District Court for the District of Arizona vacated and remanded the Navigable Waters Protection Rule in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency.*

According to the EPA (2021): "*In light of this order, the agencies have halted implementation of the Navigable Waters Protection Rule and are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice. The agencies continue to review the order and consider next steps. This includes working expeditiously to move forward with the rulemakings announced on June 9, 2021, in order to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. The agencies remain committed to crafting a durable definition of "waters of the United States" that is informed by diverse perspectives and based on an inclusive foundation*.

The agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice … The term waters of the United States means:

1. *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
2. *All interstate waters including interstate wetlands;*
3. *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:*
    a. *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
    b. *From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
    c. *Which are used or could be used for industrial purposes by industries in interstate commerce;*
4. *All impoundments of waters otherwise defined as waters of the United States under this definition;*
5. *Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;*
6. *The territorial sea;*
7. *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.*

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA" (EPA 2021).

According to guidance present prior to the pre-2015 regulatory regime (EPA 2008):

"*The agencies will assert jurisdiction over the following waters:*

- *Traditional navigable waters*
- *Wetlands adjacent to traditional navigable waters*
- *Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)*
- *Wetlands that directly abut such tributaries*

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- *Non-navigable tributaries that are not relatively permanent*

- *Wetlands adjacent to non-navigable tributaries that are not relatively permanent*
- *Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary*

The agencies generally will not assert jurisdiction over the following features:

- *Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)*
- *Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water*

The agencies will apply the significant nexus standard as follows:

- *A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters*
- *Significant nexus includes consideration of hydrologic and ecologic factors"*

Based on current guidance (EPA 2008; 2021), the perennial drainage (PD1) delineated in the study area would presumably qualify as "*Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)"* and therefore fall under USACE jurisdiction.

Sequoia acknowledges that regulatory analysis described above is preliminary and only the USACE can determine jurisdiction over aquatic resources. Due to recent changes based on court decisions, regulatory jurisdiction is in flux, and therefore the USACE would need to determine its jurisdiction in the study area based on a verification of this report.

6.2 Potential State Jurisdiction

On April 2, 2019, the SWRCB adopted a *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures), for inclusion in the *Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California*. The Procedures took effect May 28, 2020. The Procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the state; (3) wetland delineation procedures; and (4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. Aquatic resources (such as ephemeral tributaries, some drainage ditches, and isolated wetlands), which may be exempt from federal jurisdiction under the Navigable Waters Protection Rule would likely be considered waters of the State under the Porter-Cologne Water Quality Control Act and/or the Procedures that took effect May 28, 2020.

Based on the Procedures, the perennial drainage within the study area would likely qualify as "Waters of the State" subject to jurisdiction by the SWRCB, as discussed above.

Work, such as placement of fill material, occurring within USACE jurisdiction normally requires a permit under Section 404 of the federal CWA. In addition, the USACE, under Section 401 of the federal CWA, is required to meet state water quality regulations prior to granting a Section 404 permit. This is accomplished by application to the local RWQCB for Section 401 certification that requirements have been met. Streams, rivers, and lakes up to the top of bank or dripline of riparian vegetation (whichever is greater) also fall within the jurisdiction of the California Department of Fish and Wildlife (CDFW). Work within CDFW jurisdiction normally requires a Streambed Alteration Agreement.

7.0 LIMITATIONS

The results of this delineation are preliminary. Regulatory agencies, including the USACE, SWRCB, and CDFW, make the final determination about the location and extent of wetlands and other waters on the study area, and this delineation report should be sent to the USACE for verification. This report does not constitute authorization to conduct the Project, and all necessary permits and approvals should be obtained from regulatory agencies prior to Project implementation.

8.0 REFERENCES

Baldwin D.H, Goldman D.H., Keil D.J., Patterson R, Rosatti T.J., Wilken D.H. (ed.). 2012. The Jepson Manual Vascular Plants of California: Second Edition. University of California Press, Berkeley. 1568 pps.

California Geological Survey. 2010. Geologic map of California. Website at: http://www.conservation.ca.gov/cgs/cgs_history/Pages/2010_geologicmap.aspx.

Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical report Y 87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Environmental Protection Agency (EPA). 2008. Clean Water Act jurisdiction following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. Dated December 2.

EPA. 2021. Current implementation of Waters of the United States. Accessed at https://www.epa.gov/wotus/current-implementation-waters-united-states on November 9, 2021.

Federal Register. 1994. Changes in hydric soils of the United States. Washington, DC, July 13.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2018. The National Wetland Plant List: 2018 wetland ratings. Website at: http://wetland_plants.usace.army.mil/.

Munsell Soil Book of Color. 2012. Munsell Soil Color Charts: with Genuine Munsell Color Chips. Grand Rapids, MI: Munsell Color, Revised 2009.

Natural Resource Conservation Service (NRCS). 2021a. Web Soil Survey. Website at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

Natural Resource Conservation Service (NRCS). 2021b. Lists of hydric soils. Website at: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

Sawyer J.O., Keeler-Wolf T. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento, CA.

State Water Resources Control Board (SWRCB). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019.

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Wakeley JS, Lichvar RW, Noble CV, editors. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers (USACE). 2020. National Wetland Plant List. Website at: http://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html.

U.S. Geological Survey (USGS). 2021. National hydrography dataset. Website at: https://nhd.usgs.gov/.

U.S. Fish and Wildlife Service (USFWS). 2020. National Wetlands Inventory. Website at: http://www.fws.gov/wetlands.

Appendix A

Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 1

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83347 Long: -121.96507 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression where sheet flow occurs.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5)			
1. Carduus pycnocephalus	10		
2. Medicago polymorpha	10		FACU
3. Hypochaeris radicata	10		FACU
4. Brassica nigra	4		
5. Avena spp.	25	X	UPL
6. Vicia sativa	10		FACU
7. Erodium botrys	10		FACU
8. Lepidium nitidum	15		FAC
	99 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	97	2.5 YR 4/6	3	C	M	clay	Sandy mix throughout the entire
8 - 12	2.5 Y 7/2	100					clay loam	Sandy mix throughout the entire

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: none

Depth (inches): 0

Hydric Soil Present? Yes ✓ No ___

Remarks:

3% redoximorphic features found. Woody and heavy decomposed vegetation found in profile. Sand found in base layer of profile possibly due to previous trail/road development. Sand most likely not native to area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): None

Water Table Present? Yes ___ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

No hydrology present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 2

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.88372 Long: -121.96515 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken above drainage on hillslope. Mostly alluvial fan with sheet flow

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Geranium molle	15		
2. Medicago polymorpha	15		FACU
3. Bromus hordeaceus	5		FACU
4. Brassica nigra	5		
5. Avena spp.	30	X	UPL
6. Vicia sativa	10		FACU
7. Erodium botrys	20	x	FACU
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					clay	Color similar throughout profile. I

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 3

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83364 Long: -121.96582 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken on a hillslope above area where sheet flow fans out from vertical precipitation along grazed, open grassland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5)			
1. Rumex crispus	5		FAC
2. Cirsium vulgare	3		FACU
3. Medicago polymorpha	20	x	FACU
4. Carduus pycnocephalus	2		
5. Avena spp.	50	X	UPL
6. Geranium molle	20	x	
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative upland species.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					sandy clay	Sandy mix throughout the entire

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: none

Depth (inches): 0

Hydric Soil Present? Yes _____ No ✓

Remarks:

Sand found in base layer of profile possibly due to previous trail development. Sand most likely not native to area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 4

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83366 Long: -121.96584 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression where sheet flow occurs and is directed downslope.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5)			
1. Erodium botrys	10		FACU
2. Medicago polymorpha	2		FACU
3. Hypochaeris radicata	3		FACU
4. Carduus pycnocephalus	5		
5. Avena spp.	35	X	UPL
6. Vicia sativa	5		FACU
7. Festuca perennis	35	X	FAC
8. Lepidium nitidum	15		FAC
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	20	x 4 =	80
UPL species	35	x 5 =	175
Column Totals:	90 (A)		360 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/1	90	2.5Y 7/2	10	C	M	sandy clay	Redox begins at 2 inches. Color ch
2-7	10YR 4/1	80	2.5YR 4/6	20	C	M	sandy clay	Sandy mix throughout the entire
7-12	2.5Y 7/2	100					Sand	Complete sand most likely fill, ver

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

10%-20% redoximorphic features found. Woody and heavy decomposed vegetation found in profile. Sand found in base layer of profile possibly due to previous trail development. Sand most likely not native to area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): None

Water Table Present? Yes ___ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Surface soil cracks observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 5

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83305 Long: -121.96285 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topgraphical depression where sheet flow occurs.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10)			
1. Geranium molle	15		
2. Medicago polymorpha	10		FACU
3. Carduus pycnocephalus	10		
4. Trifolium spp.	5		FAC
5. Avena spp.	50	X	UPL
6. Brassica nigra	10		
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					Clay	Color similar throughout the entir

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 6

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83308 Long: -121.96282 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression where sheet flow occurs.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Geranium molle	10		
2. Medicago polymorpha	30	X	FACU
3. Bromus hordeaceus	5		FACU
4. Trifolium spp.	5		FAC
5. Avena spp.	30	X	UPL
6. Vicia sativa	10		FACU
7. Erodium botrys	5		FACU
8. Geranium dissectum	5		
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/1	100					Clay	No redox features present
3-12	2.5Y 6/2	100					sandy clay	Very light yellow coloration and p

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 7

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.88319 Long: -121.95970 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression at convergence of two heavily grazed valleys.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Geranium molle	10		
2. Medicago polymorpha	10		FACU
3. Carduus pycnocephalus	30	X	
4. Trifolium spp.	5		FAC
5. Avena spp.	5		UPL
6. Brassica nigra	30	X	
7. Anthriscus sylvestris	5		
8. Vicia sativa	5		FACU
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					loamy clay	no redox present

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present. No redox soils present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 8

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83210 Long: -121.95739 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression at convergence of two heavily grazed valleys.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Avena spp.	45	x	UPL
2. Erodium botrys	20	x	FACU
3. Brassica nigra	15		
4. Geranium molle	10		
5. Medicago polymorpha	5		FACU
6. Lysimachia arvensis	5		FACU
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					Sandy clay	No redox features present

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present. No redox soils present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 9

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.88319 Long: -121.95970 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression where sheet flow occurs.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Geranium molle	15		
2. Medicago polymorpha	10		FACU
3. Carduus pycnocephalus	10		
4. Trifolium spp.	5		FAC
5. Avena spp.	50	X	UPL
6. Brassica nigra	10		
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					Clay	No redox features present.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 10

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83210 Long: -121.95739 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in topographical depression at convergence of two heavily grazed valleys.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Avena spp.	20	x	UPL
2. Rumex crispus	15		FAC
3. Erodium botrys	30	x	FACU
4. Geranium molle	10		
5. Brassica nigra	15		
6. Lysimachia arvensis	5		FACU
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	100					Loamy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No redox

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 11

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83206 Long: -121.95731 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in tographical depression where sheet flow occurs.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10)			
1. Erodium botrys	25	x	FACU
2. Medicago polymorpha	25	x	FACU
3. Brassica nigra	20	x	
4. Avena spp.	25	x	UPL
5. Lysimachia arvensis	5		FACU
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Vegetation dominated by upland and facultative species. Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					loamy clay	no redox. Color similar throughou

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present. No redox soils present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

No hydrology observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Diablo Road Trail Project City/County: Danville Sampling Date: 12/9/2021

Applicant/Owner: Town of Danville State: CA Sampling Point: 12

Investigator(s): Andrew Ford, Ari Rogers Section, Township, Range: T01S, R01W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 10

Subregion (LRR): California Lat: 37.83210 Long: -121.95739 Datum: NAD83

Soil Map Unit Name: Cropley Clay, 2 to 5 percent slopes NWI classification: none

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

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

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

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

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

Remarks:

Point taken in drainage depression at the intersections of two ephemeral drainages.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10)			
1. Avena spp.	5		UPL
2. Geranium molle	45	x	
3. Geranium dissectum	45	x	
4. Brassica nigra	5		
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust None

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Heavy disturbance by cattle and fire line construction.

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					loamy clay	no redox. COlor similar throughou

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present. No redox soils present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): None

Water Table Present? Yes _____ No ✓ Depth (inches): None

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): None

Wetland Hydrology Present? Yes _____ No ✓

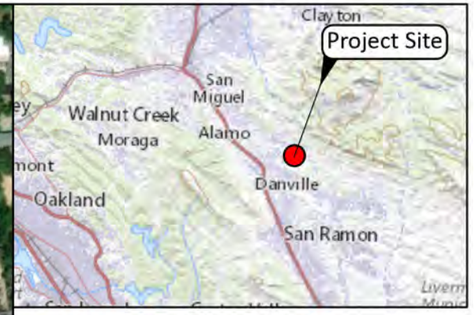
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology observed.

Appendix B

Draft Aquatic Resources Delineation Map



Project Area

PD1 (East Branch Green Valley Creek; 0.689 ac.)

Test Pit

Culvert Opening

0 100 200 400
Feet
0 30 60 120
Meters

1:4,000

Author: AlexHirth
Date Exported: 6/16/2022
Coordinate System: NAD 1983 2011
StatePlane California III FIPS 0403 Ft US

Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021., Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, SFEI & Quantum Spatial, Maxar, Microsoft, Maxar

SEQUOIA
Ecological Consulting, Inc.

Document Path: F:\GIS\Projects\KimleyHorn\DanvilleBRR\DanvilleBRR.aprx

Appendix C

Project Site Representative Photographs

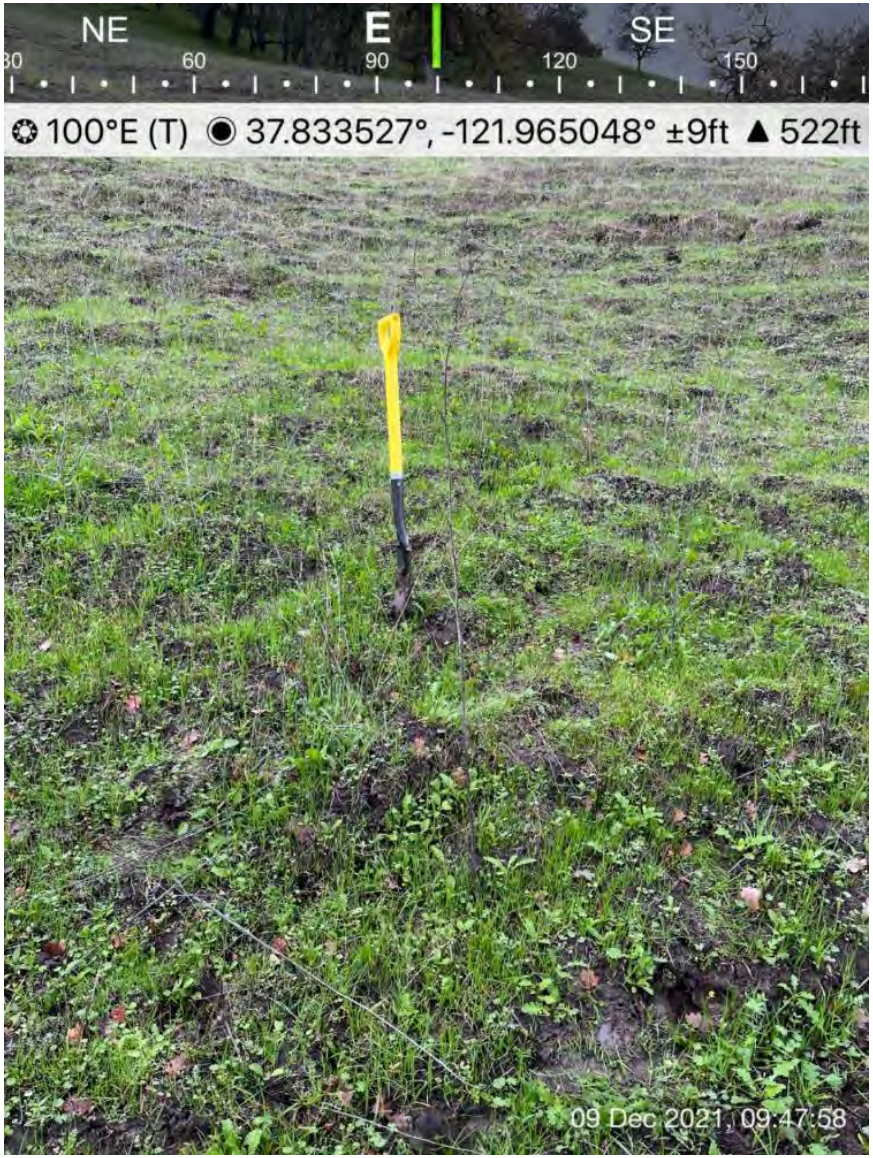
Appendix C. Study Area Photographs

Photograph 1: View of culvert that conveys East Branch Green Valley Creek beneath Diablo Road.

Photograph 2: View of eucalyptus grove along southern shoulder of Diablo Road (northern bank of East Branch Green Valley Creek) in western section of study area.

Photograph 3: View of oak woodlands above grazed non-native annual grassland in central section of study area.

Photograph 4: View of natural swale where vertical precipitation runs off hillslope above central portion of study area.



Photograph 5: Sample Point 1.

Photograph 6: Sample point 2

Photograph 7: Sample Point 3.

Photograph 8: Sample Point 4.

Photograph 9: Sample Point 7.

Photograph 10: Sample Point 8.

Photograph 11: Sample Point 9.

Photograph 12: Sample Point 10.

Photograph 13: Sample Point 11.

Photograph 14: Sample Point 12.

Appendix D

Plant Species Observed on the Diablo Road Trail Project Site

Scientific Name	Common Name	Family	Indicator Status
Aesculus californica	California buckeye	Sapindaceae	-
Avena barbata	slender oat	Poaceae	-
Avena fatua	wild oat	Poaceae	UPL
Brassica nigra	black mustard	Brassicaceae	-
Bromus diandrus	ripgut brome	Poaceae	-
Bromus hordeaceus	soft chess	Poaceae	FACU
Carduus pycnocephalus	Italian thistle	Asteraceae	-
Carex spp.	sedges	Cyperaceae	FAC
Cirsium vulgare	bull thistle	Asteraceae	FACU
Erodium botrys	cranesbill	Geraniaceae	FACU
Erodium cicutarium	redstem filaree	Geraniaceae	-
Eucalyptus globulus	blue gum	Myrtaceae	-
Festuca perennis	Italian ryegrass	Poaceae	FAC
Geranium dissectum	cutleaf geranium	Geraniaceae	-
Geranium molle	dove's-foot geranium	Geraniaceae	-
Hirschfeldia incana	shortpod mustard	Brassicacrae	-
Hordeum murinum	mousetail barley	Poaceae	FAC
Hypochaeris radicata	rough cat's-ears	Asteraceae	FACU
Juncus balticus	Baltic rush	Juncaceae	FACW
Juncus effusus	bog rush	Juncaceae	FACW
Lepidium nitidum	shining pepperweed	Brassicaceae	FAC
Lysimachia arvensis	scarlet pimpernel	Myrsinaceae	FAC
Medicago polymorpha	California burclover	Fabaceae	FACU
Quercus agrifolia	coast live oak	Fagaceae	-
Quercus lobata	valley oak	Fagaceae	FACU
Rumex crispus	curly dock	Polygonaceae	FAC
Salix laevigata	red willow	Salicaceae	FACW
Salix lasiolepis	arroyo willow	Salicaceae	FACW
Trifolium spp.	clover	Fabaceae	FAC
Typha spp.	cattails	Typhaceae	OBL
Umbellularia californica	California bay laurel	Lauraceae	FAC

Appendix B

USFWS Information for Planning and Consultation System Report

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: May 25, 2021
Consultation Code: 08ESMF00-2021-SLI-1902
Event Code: 08ESMF00-2021-E-05510
Project Name: Diablo Road Trail Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-1902
Event Code: 08ESMF00-2021-E-05510
Project Name: Diablo Road Trail Project
Project Type: RECREATION CONSTRUCTION / MAINTENANCE
Project Description: The proposed project is located along Diablo Road in Danville, Contra Costa County, California. The overall proposed project consists of a 8 to 10-foot wide off-street paved multi-use trail. This trail will connect the Diablo Road/Green Valley Road corridor to the west to Blackhawk Road/ Mt. Diablo Park south access to the east. The project site is located along Green Valley creek and Diablo Road, to the south is Magee cattle ranch property and to the north is a residential area. Green Valley creek has an elevation of 361 feet. Vegetative habitats in the surrounding area are characterized as a mixed riparian woodland, non-native annual grassland, ruderal, oak woodland, and residential. The mixed riparian woodland, non-native annual grassland, oak woodland, and ruderal habitats are located on the Magee cattle ranch property and therefore regularly grazed.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.835218350000005,-121.9673984695616,14z

Counties: Contra Costa County, California

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly *Callophrys mossii bayensis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix C

NMFS Online Species List Query Report

Quad Name **Diablo**
Quad Number **37121-G8**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - **X**
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -