NEGATIVE DECLARATION

Marin County

Environmental Coordination and Review

Pursuant to Section 21000 et. seq. of the Public Resources Code and Marin County Environmental Impact Review Guidelines and Procedures, a Negative Declaration is hereby granted for the following project.

1. Project Name: Camp Tamarancho Mountain Bike Trail System Improvements Project

2. Location and Description: 100 and 1000 Iron Springs Road, Fairfax

   The Project consists of three trail segment improvements for improved safety and erosion reduction at the Marin Council of the Boy Scouts of America's (MCBSA's) Camp Tamarancho facility, located in unincorporated Marin County adjacent to the Town of Fairfax. Two of these trail segment improvements, along the Lower Caballo Rojo Trail and Broken Dam Trail, are proposed by the MCBSA; the third trail segment improvement, along the Saddlecut Road to Trail, is proposed by the Marin County Open Space District.

3. Project Sponsor: MCBSA

4. Finding:

   Based on the attached Initial Study and without a public hearing, it is my judgment that:

   ☒ The project will not have a significant effect on the environment.

   ☐ The significant effects of the project noted in the Initial Study attached have been mitigated by modifications to the project so that the potential adverse effects are reduced to a point where no significant effects would occur.

Rachel Reid _____ Date: February 26, 2025

Environmental Planning Manager

Based on the attached Initial Study, a Negative Declaration is granted.

Chris Choo (Jun 12, 2025 11:59 PDT) _____ Date: June 11, 2025

Agency Director

1. Mitigation Measures:

   ☒ No potential adverse impacts were identified, therefore, no mitigation measures are required.

   ☐ Please refer to mitigation measures in the attached Initial Study.

All of the mitigation measures for the above effects have been incorporated into the project and are embodied in conditions of approval recommended by the Marin County Community Development Agency- Planning Division.

Other conditions of approval in support of these measures may also be advanced.

2. Preparation:

This Negative Declaration was prepared by Grassetti Environmental Consulting on behalf of the Marin County Community Development Agency - Planning Division. Copies may be obtained at the address listed below.

Marin County Community Development Agency
Planning Division
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903
(415) 473-6269

Check with the Planning Department for information about business hours and/or reviewing copies of the document at the front counter.

An electronic version is also available for review on the County of Marin Environmental Planning website.

MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION

INITIAL STUDY
CAMP TAMARANCHO MOUNTAIN BIKE TRAIL SYSTEM IMPROVEMENTS PROJECT

I. BACKGROUND

A.	**Project Sponsor's Name and Address:**	**Marin Council of the Boy Scouts of America (MCBSA)** 225 West End Ave. San Rafael, CA 94901
B.	**Lead Agency Name and Address:**	**Marin County Community Development Agency, Planning Division (MCCDA)** 3501 Civic Center Dr., Suite 308 San Rafael, CA 94903
C.	**Agency Contact:**	**Tammy Taylor** Senior Environmental Planner (415) 473-7873 Tammy.Taylor@MarinCounty.gov

II. PROJECT DESCRIPTION

A.	**Project Title:**	**Camp Tamarancho Mountain Bike Trail System Improvements Projects including Caballo Rojo Trail** (Project ID P4226 and GP15-003)
B.	**Type of Application(s):**	**Marin County Department of Public Works (MCDPW) Grading Permit(s), Marin County Open Space District (MCOSD) Approval of Saddlecut Road to Trail Project, Design Review (MCCDA)**
C.	**Project Location:**	**100 and 1000 Iron Springs Rd, Fairfax, CA 94930** AP #s: 197-110-09, 174-052-02
D.	**General Plan Designation:**	**1000 Iron Springs Rd.: Agricultural 1 (AG1); 100 Iron Springs Rd.: Very Low**

Density Residential (SF2)

E. Zoning: **1000 Iron Springs Rd.: Agriculture and Conservation - 60 Acres (A-60); 100 Iron Springs Rd.: Residential Single Family Planned (RSP-0.25)**

F. Description of Project:

A. INTRODUCTION

The Project consists of three trail improvement elements at the Marin Council of the Boy Scouts of America's (MCBSA) Camp Tamarancho facility, located in unincorporated Marin County adjacent to the City of Fairfax (see **Figure 1**). Two of these trails, Lower Caballo Rojo and Broken Dam Trail, are proposed by the MCBSA; the third trail, Saddlecut Trail and Roadway Decommissioning, is proposed by the Marin County Open Space District (MCOSD). The purposes of the proposed improvements are improved safety and erosion reduction. The history of the Tamarancho facility, the existing trail system and permitting history, and the currently proposed trails improvements are described below.

1. Camp Tamarancho Mountain Bike Trail System History and Project Context

The Camp Tamarancho mountain bike trail system consists of a network of trails installed at different times. The trail network is shown on **Figure 2**.

The Original Trail Loop established approximately 7.0 miles of singletrack trails primarily for mountain biking, though hiking is also allowed. The Original Trail Loop is comprised of six segments, as summarized in Table 1. The Original Trail Loop involved the installation of ten bridges and three boardwalks over stream courses, both to avoid impacts to these features and to create ridable trails. Construction of the Original Trail Loop is estimated to have begun in 1995.

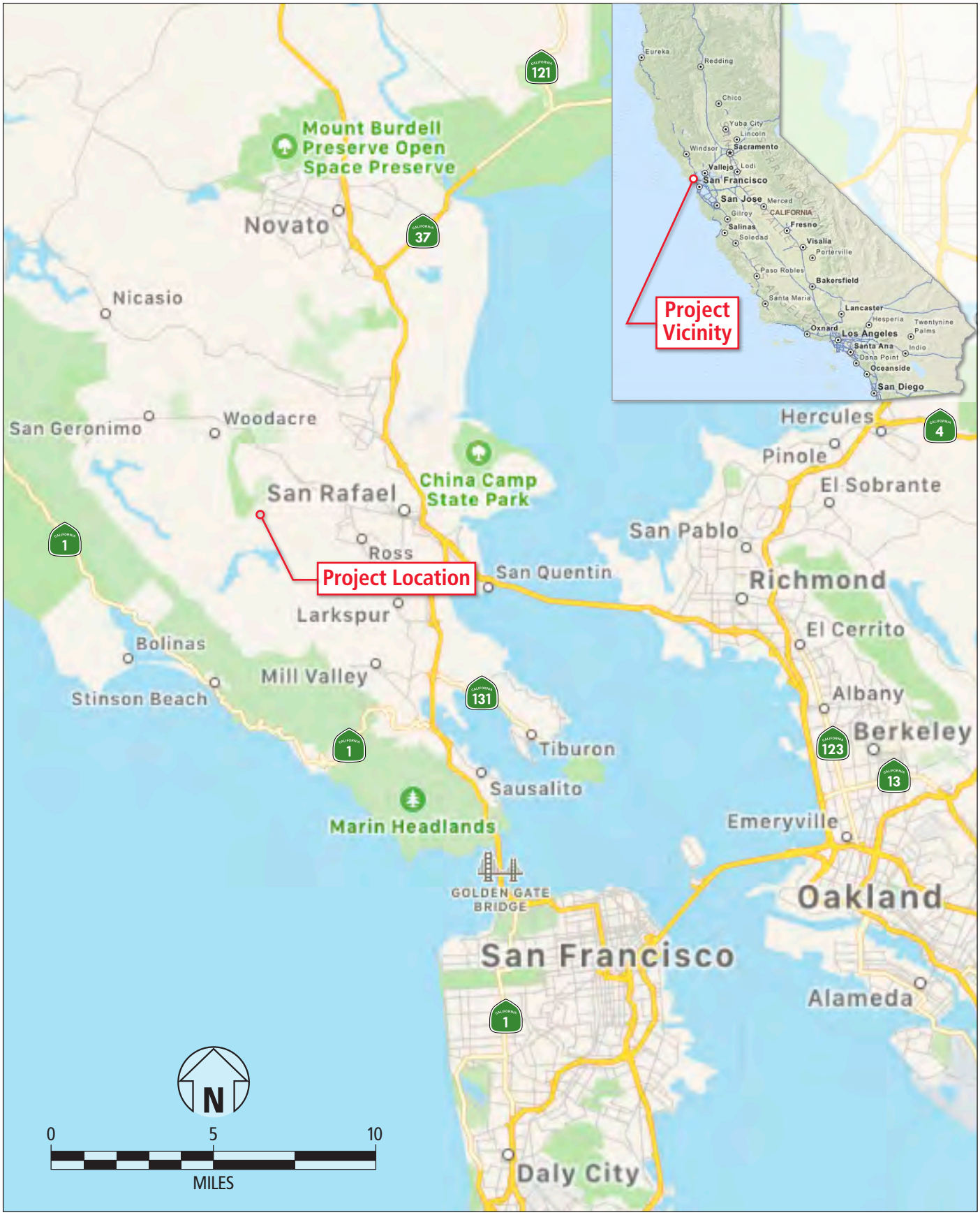

Figure 1

Project Location

Source: TomTom Maps and Grasetti Environmental

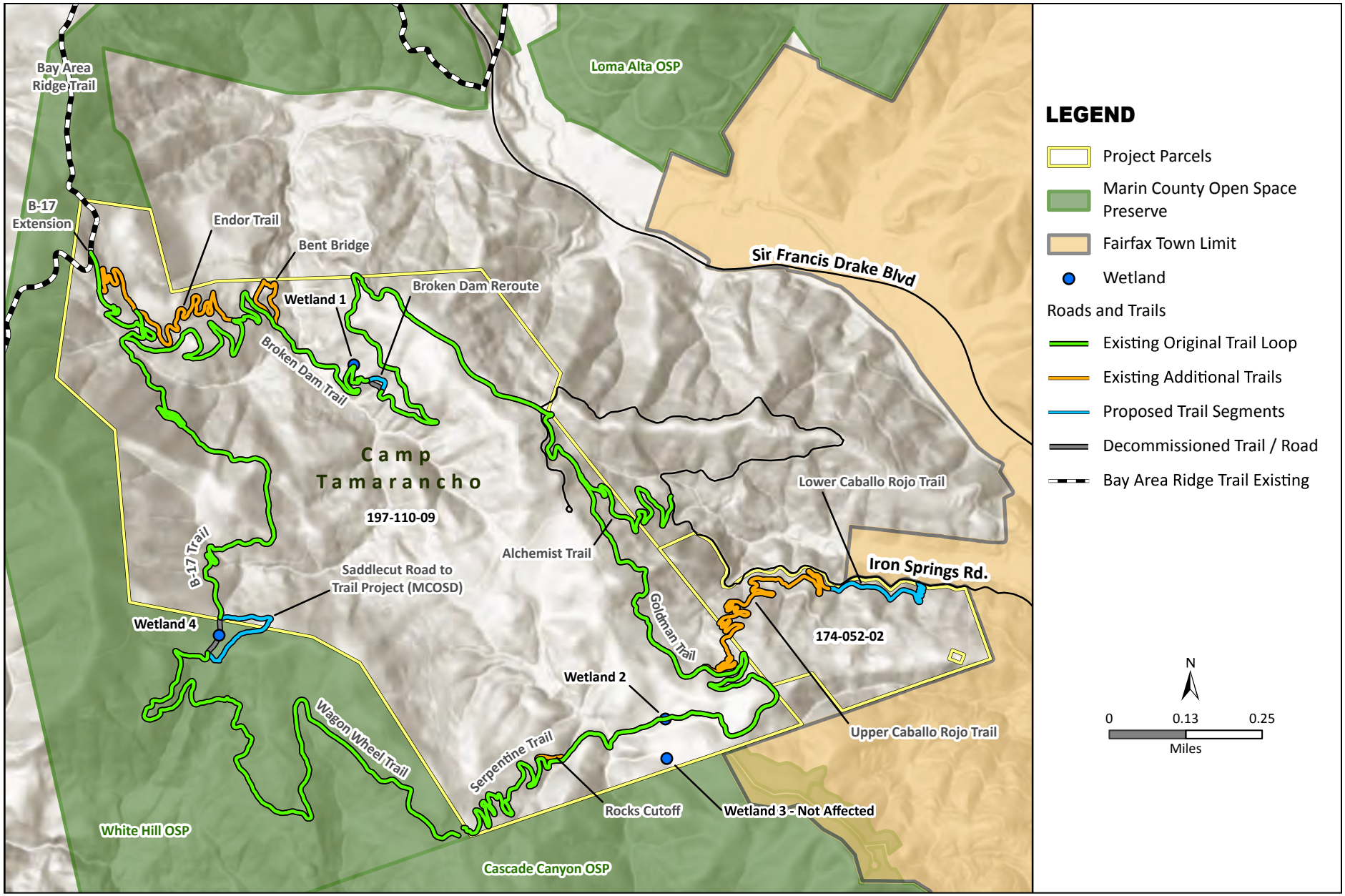

Figure 2

Proposed Trail Project Locations

Source: WRA Environmental Consultants

On November 3, 2000, MCBSA submitted Grading Permit Application, GP00-010, with Marin County Department of Public Works (DPW) and, on December 29, 2000, an addendum with information about water course crossings and retaining walls was filed. A Draft Initial Study (IS) and proposed Mitigated Negative Declaration (MND) were prepared for this Grading Permit in 2005 and circulated for public and agency review. However, the IS/MND was not adopted, the permit was not issued, and a Notice of Determination was not filed.

On April 21, 2015, in response to a citizen complaint and subsequent DPW investigation and site inspections, the Marin County DPW Land Development Division issued a Notice of Violation for an excavation at 100 Iron Springs Road for construction of the Caballo Rojo Trail extension, that exceeded 250 CY without a grading permit. As a result of the notice, construction was immediately stopped, and the Caballo Rojo Trail was closed.

The MCBSA submitted the initial Grading Permit Application for this work on August 6, 2015, and subsequent grading permit submittals were made in April 2016, May and September 2021, and April 2022, to address County comments. In July 2022, the Grading Permit Application was deemed complete by Marin County DPW, Land Development Division.

Subsequently, County Environmental Planning staff determined that all existing improvements include the Original Trail Loop, and all Additional Trails (Upper Caballo Rojo Trail, Endor, Bent Bridge and Rocks Cutoff) are to be considered “existing conditions” for the purposes of CEQA. The applicant and County are completing retroactive permitting for previously unpermitted but completed trail work.

The previously constructed trails, whether permitted or not yet permitted, are considered past cumulative development under CEQA. Existing and proposed trails are described in the discussions below, and are summarized on Table 1, below.

C. ENVIRONMENTAL SETTING

1. Project Location and Setting

Project Location

The Marin Council of the Boy Scouts of America (MCBSA) owns and operates Camp Tamarancho (approximately 410 acres in size), located west of downtown Fairfax in unincorporated Marin County (see **Figure 1**). Since 1944, MCBSA has operated Camp Tamarancho as a nonprofit organization and continues to provide healthy outdoor recreation and youth development programs.

Camp Tamarancho (the Camp) lies at the end of Iron Springs Road, an unimproved road connecting to Rock Ridge Road that joins several streets in the Town of Fairfax. The Project area also includes an adjacent, privately owned residential parcel (100 Iron Springs Road, APN 174-052-02) on which one of the proposed trails (the Caballo Rojo Trail Extension)

would be constructed. This trail would be within an existing 40-acre open space easement as donated by the property owners to Marin County.

The northeastern boundary of the 100 Iron Springs Road property abuts the Town of Fairfax boundary line, as indicated in **Figure 2**. Camp Tamarancho is comprised of a single Assessor Parcel, APN 197-110-09. **See Figures 1** and **2.** Adjacent to this site on the west and south are open space lands owned by the Marin County Open Space District (MCOSD). The parcel to the north is the Henry E. Bothin Youth Camp (Camp Bothin) property owned by the Girl Scouts of Northern California. To the east are primarily privately owned residential properties. Several residences are located near to the north entrance and to the southeast corner of the site.

The project site is accessed from Iron Springs Road. The town limit of Fairfax parallels and includes the lower third of Iron Springs Road, where the road occupies its own land parcel. At the municipal boundary, it continues into unincorporated Marin as a separate parcel, APN 197-110-09, up to 99 Iron Springs Road. After this point, Iron Springs Road is a graded dirt road that crosses three large private parcels to access to Camp Tamarancho.

The Project site is mainly uplands with elevation ranging from 650 feet to 1,000 feet. The property contains several ephemeral water ways, intermittent creeks and arroyos which flow either to Fairfax or to San Anselmo creeks, both of which drain into Corte Madera Creek. Vegetation types consist of redwoods, chaparral, extensive grasslands, and oak and mixed hardwood woodlands. Portions of the ephemeral creeks and channels support riparian habitat. Trails are located generally near the periphery of the property and traverse these upland areas, oak woodlands, chaparral and the creeks and channels.

Developed facilities for use by MCBSA and invitees are concentrated in the eastern portion of the property, leaving most of the Camp relatively undisturbed by human activity. MCBSA facilities include a bunkhouse and three cabins, two lodges, a warehouse and woodshop, rifle and archery ranges, dispersed wilderness campsites, an on-site ranger's unit, and a parking area that holds approximately 50 vehicles.

The Camp's trails link to Marin County open space preserves via fire roads. These preserves include White Hill Open Space Preserve (OSP) and Gary Giacomini OSP to the west, Cascade Canyon OSP to the south, and Loma Alta OSP to the north. The over 400-mile regional Bay Area Ridge Trail also passes through the Camp.

All trails are named and junctions are numbered on site and on maps approved by the Ross Valley Fire Department, which are available at the trailhead. The camp ranger is on-site full time and available at Camp headquarters to assist in emergency situations. While camp is in operation, MCBSA scout leaders are also available within the Camp compound. On weekends and other peak-use periods, trail monitors supervise the trail system to enforce regulations. Trail monitors report any problems to the resident on-site camp ranger that can also assist with emergency situations.

2. Existing Camp Tamarancho Mountain Bike Trail System

Overview

As discussed above, MCBSA has primary access to Camp Tamarancho, and Scout units from throughout northern California are also often invited to use the site. The Camp has organized activity centers, group camping sites, extensive hiking trails, and wilderness camp sites. During the winter months maintenance takes place while the Camp is less active. A full-time ranger lives on the property and oversees all activities at the Camp. Weekend use (on any given weekend) ranges from 10 to 350 people on any given weekend, depending on planned events and gatherings at the site. The summer day camp typically has between 125 to 175 participants (MCBSA participants), including staff, from March to October.

Most of the internal trails (not part the Mountain Bike System) were constructed for Scout hikes and camping, and that continues today. Hiking trails for Scouts are separated from The Camp Tamarancho Mountain Bike Trail System.

Mountain biking occurs around the perimeter of the Camp year-round (weather-dependent). The Camp Tamarancho Mountain Bike Trail System was specifically built for mountain bikes, with occasional use by neighborhood hikers allowed, though that is not promoted. Equestrians are not allowed. The Camp's trails link to a series of Marin County open space preserves, and the Bay Area Ridge Trail via fire roads. All mountain bikers must show a Friends of Tamarancho (FOT) trail pass upon request. The Camp provides singletrack mountain biking for riders of all ages and also serves as a local training facility for high school mountain biking teams.

On-site at the Boy Scout Camp parking is limited to about 50 spaces. The camp also has overflow areas for parking that are only used during special Scouting events. Iron Springs Road is a winding, narrow, unpaved road, with minimal shoulder areas, and provides very little opportunity for road-side parking. Vehicular traffic on Iron Springs is primarily associated with the Camp and with the homes in the surrounding low-density residential neighborhood.

Bicyclists and hikers with the FOT pass are not permitted to park on site and must either walk or bike to the property. The primary auto access route to downtown Fairfax is Sir Francis Drake Boulevard from Highway 101 through San Anselmo. Bicyclists typically use Center Boulevard to reach the central Fairfax area. Between downtown Fairfax and the Project area, Sir Francis Drake Boulevard, Broadway Avenue and Bolinas Road may be used to access the Project. Iron Springs Road is the primary access to all on-site facilities, including the Camp headquarters and access to the mountain biking trail loop. A kiosk at the primary entry point of the trail loop, near where Iron Springs Road enters the Camp about a mile from Sir Francis Drake Boulevard in Fairfax, provides relevant trail information.

A cell tower provides cellular phone coverage throughout the Camp Tamarancho property, so emergency calls can be made directly to first responders if needed.

Mountain Bike Trail Use and Access

Access to the mountain bike trails is available to those with an affiliation to the MCBSA, namely Boy Scouts or those with a FOT season membership pass or day membership pass. FOT membership passes are available online and at bike shops in Marin County.

All members are required to support other members on the trail and report any unusual trail conditions or activities along the trail. The entry kiosk includes free trail maps for all passholders to orient themselves. The trail loop roughly follows the perimeter of the property and FOT members provide additional security for MCBSA on Camp property. The site is used year-round by cyclists with authorization from MCBSA, though access to the Trail System is closed immediately after rains to protect the trails from erosion. Hiking is permitted on the trails; however, most use is by cyclists. Parking by trail users at both the Camp and on Iron Springs Road is prohibited.

The FOT have limited trail access defined by the Rules and Regulations adopted by the MCBSA in January 2003. The MCBSA trail-use rules include:

- All riders must carry a FOT identification card authorizing site access that is visible and available for inspection by any Scout leader or patrol person when requested.
- Cyclists and hikers may only use the specifically marked trails and roads shown around the perimeter of the camp property. The speed limited on all trails and roads is 15 miles per hour.
- Use is permitted year-round from sunrise to sunset unless the Camp is posted as “Closed to Friends of Tamarancho” (e.g., due to fire danger, rain, and/or camp-wide events). Nighttime trail use is prohibited.
- The trail system is closed during and following rain events, and Endor Trail is typically closed for longer periods to allow berms to dry.
- Dogs are not allowed on-site.
- Littering, vandalism, harm to animals or people, and the destruction of property is prohibited and not tolerated.
- Access to the Camp is via authorized trails and limited road use only.
- Vehicle access and parking is not allowed, including along Iron Springs Road.
- Equestrian use is prohibited.

Existing Trail System

The three primary components of the existing Camp Tamarancho trail system are; 1) the Original Trail Loop, 2) Additional Trails (constructed after 2005), and 3) Proposed Trails (not yet constructed). The existing components were built over an approximately 20-year period with volunteer labor. All trail components are summarized in **Table 1**, shown in **Figure 2**,

and described below. All trails are designed within standards established by the International Mountain Biking Association (IMBA) in cooperation with the Bureau of Land Management (IMBA/BLM 2017).

Original Trail Loop. The 7.0-mile trail loop was constructed between 1995 and 2001 and consists of six different trail segments, named in clockwise order from the primary access point on Iron Springs Road: Alchemist, Goldman, Serpentine, Wagon Wheel, B-17, and Broken Dam. The Original Trail Loop is primarily on MCBSA property, though the Wagon Wheel segment is on the White Hill OSP, which is now owned and managed by MCOSD.

The Original Trail Loop Project replaced approximately 10.3 miles of combined existing singletrack and dirt roads that were not specifically designed for cycling, nor maintained on a regular basis; these trails and roads were decommissioned, resulting in a net reduction of 3.7 miles of trails/roads.

Additional Trails (constructed since 2005). Following completion of the Original Trail Loop, four trails were added between 2005 and 2015 that are now part of the existing conditions at the Camp. All of these trails except the Upper Caballo Rojo trail are currently in use. The Additional Trails are:

Bent Bridge Trail – A short (0.1 mile) detour constructed in 2012 crosses an ephemeral stream with a small "bent" bridge, completely built above top of bank. The detour was built to allow repairs on Broken Dam Trail that resulted from a fire road failure above the trail. The detour remains in place.

Rocks Cutoff Trail – A short (0.2 mile) alternate trail along Serpentine Trail constructed in 2012 to avoid a technically challenging section that passes over a rocky outcrop. The Rocks Cutoff trail crosses an ephemeral drainage on hard rock where there is no stream bed or bank visible (WRA 2015a).

Endor (Flow) Trail – A 0.7 mile "flow" trail constructed in 2010 as an advanced downhill segment to be used in parallel with the initial 0.4-mile segment of Broken Dam Trail, for an internal loop[1]. The estimated disturbance footprint is approximately 0.3 acre. Two wetlands in the area were fully avoided and there are no stream crossings.

Upper Caballo Rojo Trail – Constructed in spring 2015 on the adjacent parcel, the trail is approximately 4,500-feet (0.8-mile) long with 22 switchbacks. Marin County issued a Notice of Violation in April 2015 that stopped construction and required a Grading Permit for movement of over 250 CY of soil. As discussed above, this trail is currently closed pending County Grading Permit approval.

[1] A mountain biking flow trail is a smooth, wide trail with undulations and berms that is designed to be enjoyable and easy to ride. Flow trails are often considered to be less intimidating than traditional trails and are a good option for beginners and intermediate riders.

B. PROPOSED PROJECT TRAIL IMPROVEMENTS

1. Introduction

Three trail improvements are proposed as part of the Project and would be integrated into the facility's existing trail system for use and together constitute the Project for purposes of this CEQA document. Two of these trails, Lower Caballo Rojo and Broken Dam Trail, are proposed by the MCBSA; the third trail, Saddlecut Road to Trail, is proposed by the Marin County Open Space District (MCOSD). Marin County Planning is the Lead Agency for the Project. The MCOSD would be a Responsible Agency and would use this environmental review document in their approval of this portion of the overall Project. All trails would be constructed in a six-to-eight-week period after the end of the bird nesting season (August 15), with all grading being completed by October 15. It is likely that all Project elements would be constructed in the Fall of 2025, assuming all permitting is completed at that time. The proposed new trail improvements are summarized here and described in detail in Section C, below.

Table 1. Existing and Proposed Camp Tamarancho Mountain Bike Trail System

Trail Segment Name	Length (miles)*	Disturbance footprint** (Acres)	Trail Notes
Original Trail Loop			
Alchemist	0.5	0.24	Two-way access to/from Iron Springs Road
Goldman	1.1	0.53	Traverse below Camp Headquarters
Serpentine	0.9	0.44	Climb to Cascade Ridge
Wagon Wheel Trail (MCOSD)	1.3	0.63	Traverse on White Hill Open Space lands
B-17 & B-17 Extension	1.3	0.63	Extension ties into Endor & Bay Area Ridge Trail
Broken Dam	1.9	0.92	Down to Fairfax Cr. tributary, up to Iron Springs Rd.
Lake Spur (not in Trail System)	(0.2)	(0.1)	Closed to bikes in 2006
TOTAL	**7.0**	**3.39**	
Existing Additional Trails (to the Original Trail Loop)			
Endor (Flow)	0.7	0.34	2010, off B-17 Extension to Broken
Bent Bridge	0.2	0.09	2012, detour to avoid road damage
Rocks Cutoff	0.1	0.05	2012, to avoid rock outcrop
Upper Caballo Rojo	0.8	0.51	2015, to improve safety on Iron Springs Road
Additional Trails	***1.8***	***0.99***	
*Proposed New Trails^*			
Lower Caballo Rojo	0.25	0.19^	Construction halted in 2015
Saddlecut Road to Trail (MCOSD)	0.25	0.19^	+ 0.07 ac. road restoration proposed
Broken Dam Reroute	0.11	0.08^	600' new trail. Removes/restores 550' of old trail
Proposed New Trails	***0.56***	***0.46^***	

Source: P. Curfman, 2024. * Actual mileage measured by WRA Inc. in 2015.

** Disturbance footprint based on 4-foot average width.

^ Conservative estimate of 6-foot average disturbance width for initial trail construction on steeper slopes

Lower Caballo Rojo Trail Segment– The MCBSA is proposing to complete the lower 0.3-mile segment of the greater Caballo Rojo Trail for cyclists to bypass a portion of lower Iron Springs Road. This segment would include a bridge, a boardwalk, and a retaining wall at the intersection with Iron Springs Road. This Project element also would include two additional boardwalks along Upper Caballo Rojo; the trail was previously constructed, but the boardwalks are proposed as part of the current Project application, as requested in consultation with the California Department of Fish and Wildlife (per Notification No. 1600-2015-0270-3). The trail outlet onto Iron Springs Road would be in the Town of Fairfax, and would require an encroachment permit from the Town.

Saddlecut Road to Trail Segment– The MCOSD is proposing to restore a portion of the poorly aligned and eroding Saddlecut Fire Road, which spans the boundary between MCOSD and MCBSA lands, and construct a new replacement trail segment between the lower portion of that road and the Original Trail Loop. This proposed Project element includes: 1) construction of approximately 1,310 feet of trail, and 2) decommissioning and restoration of a 320-foot segment of the old Saddlecut Fire Road using Best Management Practices (BMPs) as identified in the County's Road and Trail Management Plan (RTMP),[2] to restore natural grades and hydrology, promote native revegetation and arrest erosion.

Broken Dam Trail Reroute Segment– The MCBSA is proposing to realign a portion of the Broken Dam Trail to avoid an unstable section at an ephemeral tributary to Fairfax Creek along Broken Dam Trail, where a gully is eroding a small side canyon. A 24-foot-long bridge/boardwalk at the top of the gully would be removed to avoid unsafe riding conditions. The Project proposes 600-feet of trail to avoid the gully and potential impacts to it from the stream. The decommissioned portion of the current trail would be restored to natural conditions.

2. Project Objectives

Objectives for each of the proposed trail segments are provided below.

Caballo Rojo Trail Segment. The Camp headquarters is approximately two miles up the narrow and winding Iron Springs Road, the lower third of which is paved. Camp visitors, supplies, and most mountain bikers arrive to the Camp via Iron Springs Road, which terminates at the Camp. Mountain bikers must ride their bikes up to the trailhead, located approximately one mile up Iron Springs Road, and back down Iron Springs Road on return. The downhill return to Fairfax can lead to bicycle encounters with uphill-bound cars. While accidents are rare, MCBSA seeks to avoid these encounters by moving downhill cyclists off Iron Springs Road to the proposed Caballo Rojo Trail. The completed Caballo Rojo Trail

[2] On December 16, 2014, the MCOSD Board of Directors approved the Road and Trail Management Plan (RTMP) and certified its program Environmental Impact Report (EIR) (State Clearinghouse Number 2011012080). The RTMP is a science-based comprehensive management plan to guide the MCOSD in the:

1. Establishment and maintenance of a sustainable system of roads and trails;
2. Reduction of environmental impact from roads and trails on natural resources; and
3. Improvements to visitor experience and safety

would be a singletrack, downhill-only trail linking the Original Trail Loop (specifically the Goldman Trail segment) with lower Iron Springs Road. This Project element is designed to improve safety and does not promote or accommodate any expansion of use of the greater trail system.

Saddlecut Road to Trail Segment. The purpose of the proposed Saddlecut Road to Trail segment is to create a sustainable road and trail network and to reduce environmental impacts stemming from the road and trail system. This Project element would enhance the visitor experience by providing a safe single-track trail in lieu of a poorly designed 'fall-line' fire road, would improve environmental quality for sensitive resources by eliminating the duplicative fire road, and would reduce erosion, water pollution, and habitat degradation. The proposed Project element would improve the trail in the White Hill OSP so that it meets design and management standards. This Project element would meet the goals of the MCOSD's Road and Trail Management Plan, which are to:

1. Establish and maintain a sustainable system of roads and trails that meet design and management standards.

2. Reduce the environmental impact of roads and trails on sensitive resources, habitats, riparian areas, native and special-status plant and animal species.

3. Improve visitor experience and safety.

Implementation of the proposed segment would achieve the following objectives:

- Provide safe and sustainable year-round trail access
- Eliminate an unsustainable road segment
- Enhance habitat quality
- Improve visitor access
- Reduce road related erosion
- Reduce road density and habitat fragmentation
- Improve in-stream water quality

Broken Dam Trail Segment. The Broken Dam Trail Reroute segment is intended to avoid the unstable section of an ephemeral tributary to Fairfax Creek, where a gully is eroding a small side canyon. The existing alignment is 550 linear feet. At the gully, the gradient steepens abruptly just below the existing stream crossing. An existing 24-foot-long boardwalk crosses the stream where slopes are not stable. The existing boardwalk cannot be reinforced without potential for loss or unsafe riding conditions. The objective of the proposed reroute is to provide a long-term, economically feasible solution for safe passage of cyclists in this trail segment.

3. Proposed Trail Improvements

Lower Caballo Rojo Trail Segment

Caballo Rojo Trail is planned to be approximately 5,800 feet (1.1 miles) in length overall, with 29 switchbacks and an elevation drop of approximately 370 vertical feet (**Figure 3**).

Upper Caballo Rojo is an existing trail that is approximately 4,500 feet long. The trail was constructed with permission of the property owner in 2015 and is currently closed to use pending approval of the County Grading Permit and the County Design Review processes. Upper Caballo Rojo Trail starts in Camp Tamarancho, but quickly descends into the adjacent 100 Iron Springs Road parcel (APN 174-052-02; approximately 49 acres in size) where it stays within a 40-acre open space easement donated by the owners to the County of Marin. The recreational component of Caballo Rojo Trail would be consistent with the terms of the easement.

The Lower Caballo trail alignment is also located on the neighboring private property at 100 Iron Springs Road. The proposed Lower Caballo Rojo segment would complete the Caballo Rojo Trail by adding approximately 1,300 linear feet (0.3 mile) of trail connecting the upper Caballo Rojo trail to Iron Springs Road. Two boardwalks planned for the Upper Caballo Rojo trail were not yet constructed at the time trail construction was halted. A view of the upper Caballo Rojo Trail is provided in **Photo 1**, below. Descriptions of trail construction methods and BMPs proposed in trail construction are presented in the General Construction Methods discussion at the end of the Project Description.

The Caballo Rojo Trail is completely within the upper Bothin Creek sub-watershed and is located upslope from Iron Springs Road. All drainages flow under Iron Springs Road and into Bothin Creek via culverts. Streams 2, 3a, 3b, and 4 intersect the proposed lower trail just before being intercepted by 12- to 18-inch culverts that direct flow under Iron Springs Road and further below into the culverted Bothin Creek at the bottom of the valley which then flows into Fairfax Creek.

The new trail segment would include a 24-foot bridge across ephemeral Stream 4. It also would include three new boardwalks over ephemeral Streams 2, 3a, and 3b, two of which would be located on the previously graded Upper Caballo Rojo Trail (see **Figure 3**). The trail exit would include a series of switchbacks and a 3-foot-tall above-grade wall (with posts set 6 feet underground) at its intersection with Iron Springs Road. A view of the lower Caballo Rojo Trail alignment and Iron Springs Road is shown on **Photo 2**. No tree removal is proposed.

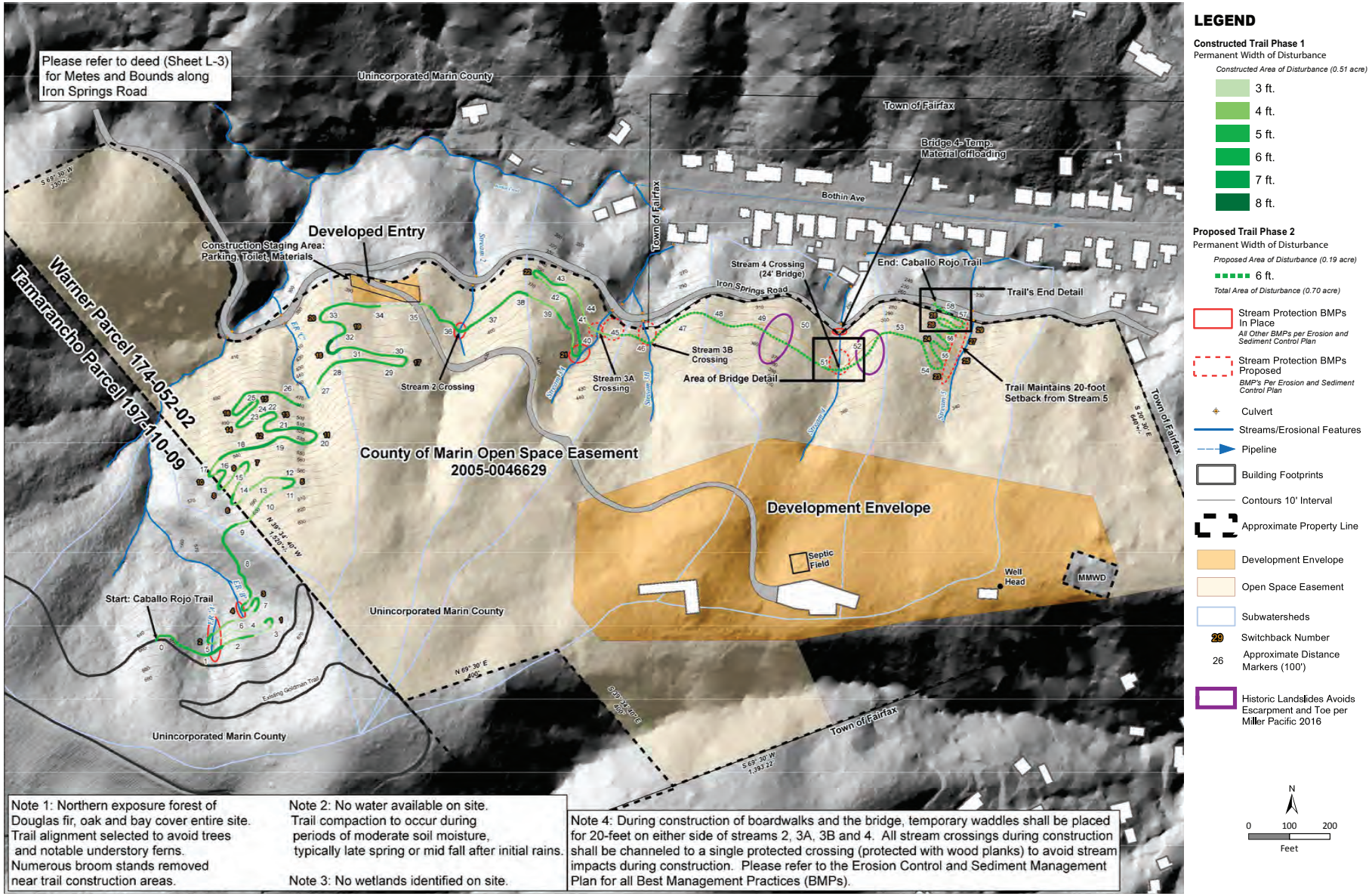

Figure 3

Caballo Rojo Trail Layout and Grading Plan

Source: Golden Gate LIDAR Topography & WRA Environmental Consultants

Photo1: View of previously constructed upper Caballo Rojo Trail from 100 Iron Springs Road Driveway

Applicants have included Best Management Practices (BMPs)[3] in the Avoidance and Minimization Measures section below to protect the watershed at stream crossings, to minimize erosion, and to protect vegetation/habitat. Incorporation of these BMP's have been included as part of the Project to avoid or minimize impacts of the Project to environmental resources. Please note that BMPs are differentiated from "Mitigation Measures, which would be associated with potential ongoing impacts of the Project (if any) *after* BMPs are incorporated.

[3] BMPs are standard environmental, health, and safety practices that represent current professional standards for avoiding adverse effects to the environment, workers, and the public.

Photo 2: View of Lower Caballo Rojo Trail alignment with Iron Springs Road on the left

Free-span boardwalks and a bridge would be constructed over the ephemeral streams that intersect the lower trail route would avoid all in-stream construction. Structural foundations would be excavated with small equipment. Bridge and boardwalk structures would be constructed with electric hand tools. Direct impacts to streams would be prevented by installation of temporary foot bridges and fencing on either side of each stream feature. These improvements are detailed below.

Bridge over Stream 4. The bridge over Stream 4, which is ephemeral, would be 4 feet wide by about 24 feet long and would have railings on either side (see **Figure 4**). This bridge would avoid any in-stream work and all bridge footings would be greater than 4 feet from the top of bank. The bridge deck bottom would be about 8.5 feet above the top of bank.

Boardwalks over Streams 2, 3a, and 3b. Free-span boardwalks would be constructed over Streams 2, 3a, and 3b (see **Figures 3** and **5**). The boardwalks would be less than 18 inches high and approximately 4 feet wide by up to 18 feet long to avoid any in-stream construction and all boardwalk footings would be constructed above the ordinary high-water mark elevation and beyond top of bank, outside the jurisdiction of the US Army Corps of Engineers and the San Francisco Bay Regional Water Quality Control Board. There is no riparian vegetation along these ephemeral streams, and no in-stream work is proposed at the crossings.

Avoidance of Stream 5. Caballo Rojo Trail would completely avoid Stream 5, which is ephemeral, at the eastern end of the property by maintaining a minimum 25-foot offset from the stream's top of bank.

Intersection with Iron Springs Road. The proposed Lower Caballo Rojo Trail would end on the uphill side of Iron Springs Road, just inside the Town of Fairfax boundary. The point of connection was selected for maximum sight distance of approximately 150 feet both up and down Iron Springs Road. Descending the last portion of the trail, Iron Springs Road becomes visible so cyclists would be aware of the trail's end. An intersection warning sign would be posted above the last switchbacks to warn cyclists to SLOW, LOOK and STOP as needed before entering the intersection with Iron Springs Road.

The last 60 feet of the trail would be paralleled by a wooden retaining wall supported by metal piles in subsurface concrete piers (**Figure 5).** Split redwood railings would be provided on the roadside of the side-hill structure. The lower end of the ramp would transition into a 3-foot retaining wall at the edge of Iron Springs Road. A view of the Iron Springs Road and Lower Caballo Rojo Trail junction is shown in **Photo 3**.

Excavation Quantities. The new trails are estimated to result in a total cut and fill of 118 CY, which would be balanced on the site.

Saddlecut Road to Trail Project

Segment Description

The Saddlecut Road to Trail segment would maintain and improve the existing trail link between the Wagon Wheel Trail in the White Hill OSP and the B-17 Trail at Camp Tamarancho (**Figure 6**). Wagon Wheel Trail connects directly with the Saddlecut Fire Road (also known as Timber Canyon Fire Road on the MCBSA property) at the intersection with Blue Ridge Fire Road. The fire roads predate the Original Trail Loop.

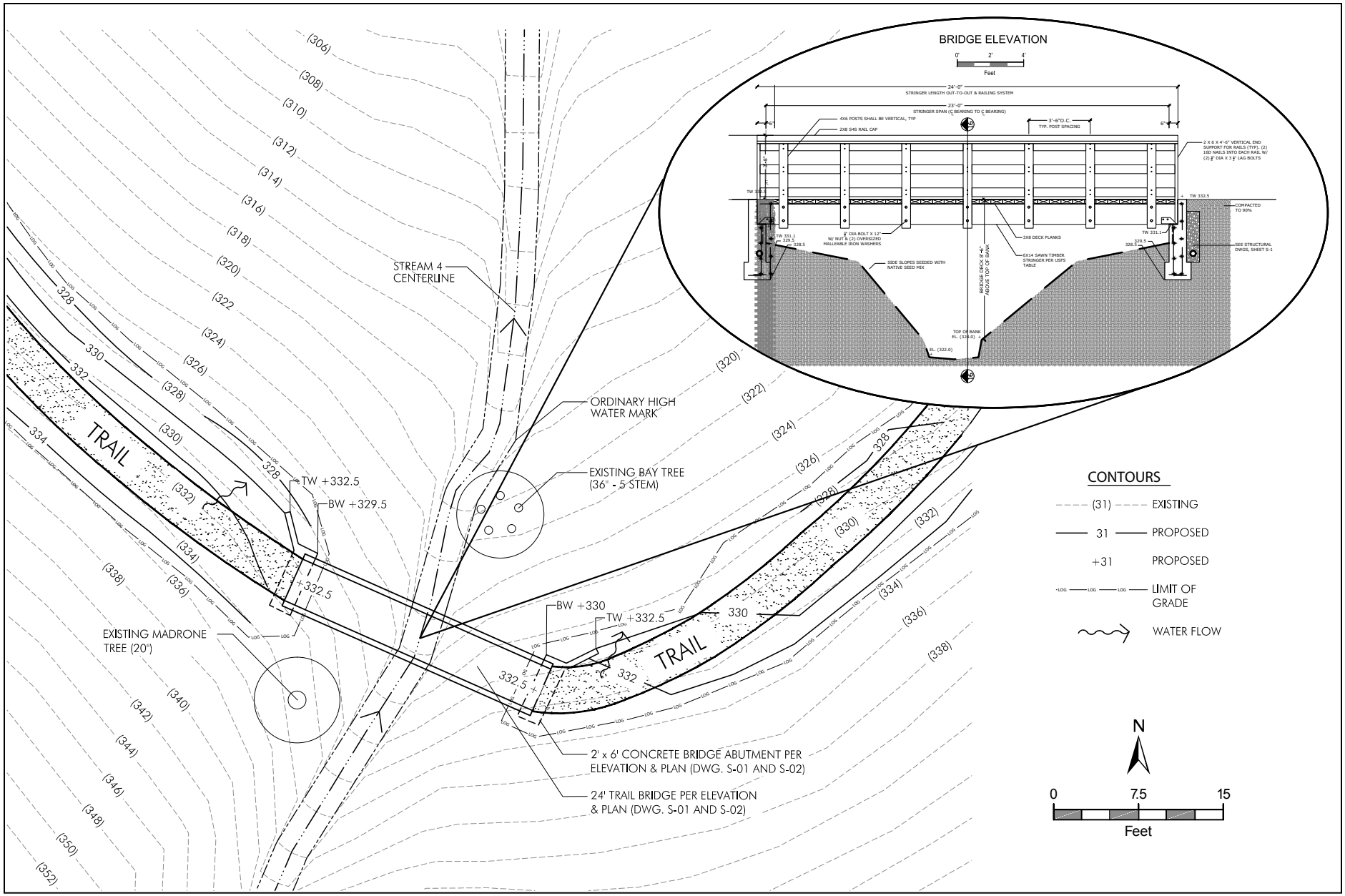

Figure 4

Caballo Rojo Bridge at Stream Crossing 4

Source: WRA Environmental Consultants

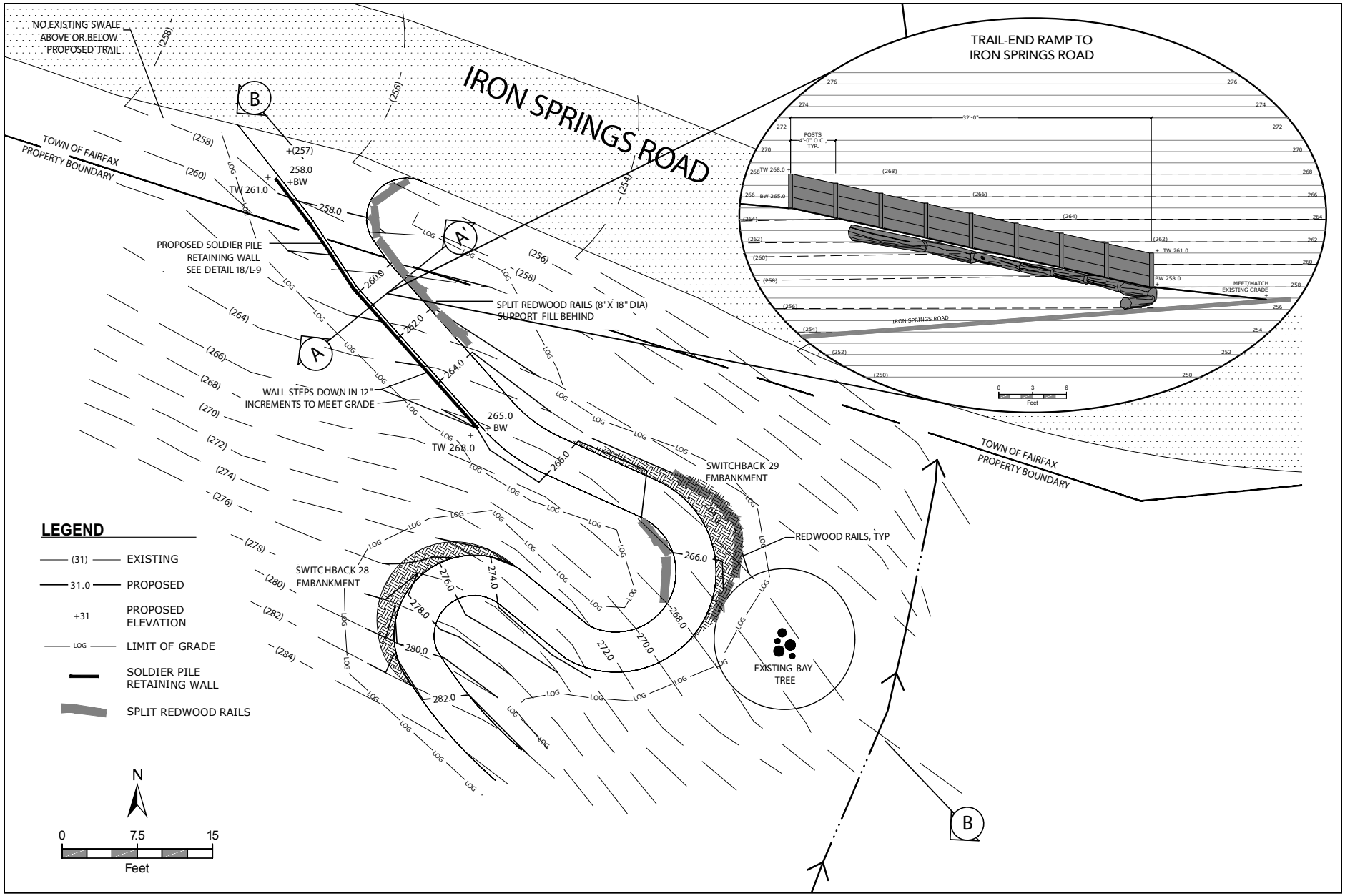

Figure 5

Caballo Rojo Trail Ramp Plan

Source: WRA Environmental Consultants

Photo 3: View of Iron Springs Road near proposed terminus of Lower Caballo Rojo Trail

Through-access on the trail system is currently via the poorly aligned and eroding 385-foot segment of the Saddlecut Fire Road which spans the boundary between MCOSD and MCBSA lands (see Photo 4). The road concentrates stormwater runoff, which has led to erosion of the road surface and sediment mobilization. Sediment has accumulated near the bottom of the slope on MCBSA lands. The Saddlecut Fire Road bisects a largely intact native grassland.

Photo 4: View of the existing Saddlecut Fire Road section proposed for restoration

The proposed trail improvement includes the following elements:

1. Construct approximately 1,310 feet of sustainable multi-use trail (570 feet on MCOSD-owned land and 740 feet on MCBSA-owned land) to replace access lost by decommissioning the eroding Saddlecut Fire Road, following construction standards identified in the RTMP (Marin County 2014). The Saddlecut Trail would be constructed in advance of decommissioning the road.

Figure 6

Saddlecut Fire Road Decommission and Proposed New Trail

Source: Marin County Parks

2. Decommission and restoration of 320 feet of eroding and unsustainable road, from the Blue Ridge Fire Road to the entrance of the B-17 Trail, utilizing BMPs identified in the RTMP (Marin County 2014) and summarized in the Construction Methods subsection below, to restore natural grades and hydrology, promote native revegetation, and minimize erosion.

The total area of road decommissioning and restoration would be approximately 3,200 square feet. Decommissioning would include decompaction of the road tread, reestablishment of the natural slope contour through the road prism to the extent possible, installation of erosion control products (blankets, waddles, coir logs), and seeding and planting of native grasses throughout the road prism. Decommissioning the road through decompaction, recontouring, seeding, planting, and mulching would aid in restoring the continuity of the grassland habitat.

A 2.5-foot-wide by 1.5-foot-average-depth berm (44 cubic yards) running along the western road edge would be moved into the road cut and used for road recontouring, reshaping, and the construction of cross drains. Six cross drains would be installed. The average cross-drain dimensions would be 20 feet by 2 feet by 2 feet, for a total of about 20 cubic yards of material.

Decompaction would slow surface runoff and promote infiltration of storm waters during precipitation events. Slope recontouring would aid in the dispersal of runoff and would reestablish natural drainage patterns across the decommissioned road prism. Installing permanent drainage control features, such as cross drains, in areas where total slope recontouring is not possible would effectively divide these areas into multiple micro-catchments to ensure that drainage areas are minimized and erosive concentrated flows cannot develop.

Seeding and planting would provide an opportunity for native grasses to reestablish the area and hold the soil. The proposed road decommissioning would require the use of equipment, including an excavator, dozer, and water truck. Construction staging areas would be restricted to existing fire roads. Access to the Project site for construction vehicles and equipment would be from Blue Ridge Fire Road. Road and trail closures would not be required for Project construction other than for the decommissioned segment of the road. Road decommissioning and restoration work would not impact jurisdictional waters, other than eliminating the chronic erosion, accumulated sediment, and sediment delivery from the road.

MCOSD proposes to construct the new trail on a different alignment. One trail segment would be constructed to replace the decommissioned road and provide a sustainable connection between the Wagon Wheel Trail and the B-17 Trail. Accumulated sediment from the old Saddlecut Fire Road would be removed at the intersection with the B-17 trail. The excavated material would be spread along-side the trail (side-cast) and raked into the native slope below the trail. The Saddlecut Trail would be a hand-built, single-track trail with an average width of 1.5 feet. The average hillslope gradient containing the proposed trail corridor is 50%. To achieve a full-bench trail, approximately 27.5 cubic yards of material would be excavated along the 1,308-ft. trail corridor. The total area of impact for new trail construction would be 2,616 square feet.

MCOSD Operations and Maintenance

The portion of the new trail on MCOSD land would be designated into the Region 2 Trail System and would be published on trail maps. Once the trail is incorporated into the MCOSD Trail System, the segment of trail on MCOSD lands would be maintained by MCOSD staff. Regular maintenance of the trail surface and drainage includes brushing the trail corridor and clearing trail obstructions, such as fallen trees and tree branches, as needed. As part of the proposed Project, the decommissioned road segment would be monitored to ensure revegetation and other closure methods are successful in preventing continued use of the decommissioned road. Minor maintenance work may occur as needed to prevent access to the decommissioned road. The Camp or their agents would be responsible for operations and maintenance of the new segment of trail occurring on MCBSA property.

Broken Dam Trail Reroute Segment

Segment Description

New Trail Construction

The proposed new trail would be approximately 600 linear feet and would be higher on the hill slope than the existing trail to avoid the unstable stream crossing (see **Figure 7**). From the bottom up, the realignment would start on a knoll from the existing trail at about elevation 615 feet above sea level and rise between trees via two gentle switchbacks to an open grassy ridge at elevation of 630 feet above sea level. Cycling lines for a total of three switchbacks are laid out to control speed and allow for a smooth descent. The trail would continue at a gentle climb, generally following the contour across a grassy side-slope before entering the forest. The upward grade would continue through the forest while avoiding trees to a rock-hardened ephemeral stream crossing at elevation of 645 feet above sea level, before the trail descends through a mixed forest and meadow area back down to meet the existing trail at elevation of 630 feet above sea level.

The ephemeral stream typically flows under a rocky scree-field[4] where there is no visible stream bed or bank. The surface trail crossing would be smoothed and hardened with nearby available rock. Low flows would continue to flow through the porous rock beneath the trail surface, and higher flows would pass over the hardened trail. There is no riparian vegetation along these ephemeral streams and they are not considered Stream Conservation Areas (SCAs) as defined in the Countywide Plan. Direct impacts to the area would be minimized by installation of temporary boardwalks over the surface of the rocks. There is no understory vegetation in the stream crossing area to protect, and the existing Douglas fir trees would be temporarily protected during construction.

Insert Figure 7- Broken Dam Plan, here

[4] Scree is a mass of small loose stones that cover a part (or all) of a slope.

Construction of the new alignment would begin from the top down so that the upper trail would provide access for construction. The bottom of the lower trail would be constructed simultaneously as the upper trail. About 70 cubic yards of soil would be excavated in this segment. Excavated materials would be spread as fill on the site, as described under "Overall Construction Methods", below.

No trees would be removed for this Project segment.

Existing Trail Decommissioning

Once the upper trail is completed, mountain bikers would be directed via signage to take the new trail. The existing 550-foot trail would then be decommissioned. Decommissioning would involve removing the existing 24-foot-long boardwalk (see **Photo 5**) and restoring the existing trail bed back to the original grade. Restoration would include filling the existing bench cuts with available soil materials, finish grading, seeding, and crimp-mulching slopes with straw and placing erosion control blanket as needed on the steepest slopes. The existing boardwalk to be removed is shown on Photo 5.

Erosion control BMPs would be implemented in sensitive areas in advance of any predicted heavy rains. As described above, volunteer crews of 6 to 12 people would conduct most of the trail work.

4. Construction Methods, BMPs, and Maintenance Measures Applicable to All Proposed Segments

Construction Timing and Duration

Construction would comply with the Marin County Code: 6.70.030 – Loud and Unnecessary Noises. Relevant portions of this code section are excerpted below and discussed further in the Noise section:

a. Hours for construction activities and other work undertaken in connection with building, plumbing, electrical, and other permits issued by the community development agency shall be limited to the following:
    i. Monday through Friday: 7 am to 6 pm
    ii. Saturday: 9 am to 5 pm
    iii. Prohibited on Sundays and Holidays (New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.)

b. Loud noise-generating construction-related equipment (e.g., backhoes, generators, jackhammers) can be maintained, operated, or serviced at a construction site for permits administered by the community development agency from eight a.m. to five p.m. Monday through Friday only.

Photo 5: Existing Broken Dam Trail Boardwalk (to be Removed)

Construction on each Project element would require approximately two to four weeks to complete. Construction for all segments would occur after the end of bird nesting season (August 16th). All earth movement associated with cut and fill trail grading would be completed by October 15th Moist soils are needed for final compaction to the 85-percent compaction rates recommended (MP 2016a). Since only rainwater is available in this area and light rains create optimal conditions for trail compaction, compaction work may need to continue beyond October 15, as weather permits. Erosion control BMPs would be implemented in sensitive areas in advance of any predicted heavy rains.

Construction Standards

All of the proposed trail improvements would utilize similar trail construction standards established by the International Mountain Bicycle Association (IMBA) in *Trail Solutions, IMBA's Guide to Building Sweet Singletrack* (IMBA 2004). The IMBA later partnered with the Bureau of Land Management (BLM) to produce *Trail Guidelines for a Quality Trail Experience* (IMBA/BLM 2017), The RTMP (Marin County 2014) guides trail evaluations and implementation by the MCOSD and is cited as being specifically applicable to the Saddlecut Road to Trail Project (MCOSD 2022).

Grading for all trails utilizes balanced cut-and-fill techniques whereby soil is excavated on the uphill side on a trail and used to fill the downhill side. No soil is imported nor exported from any particular site. Hand tools, mechanized wheelbarrows, and sometimes very small, trail-wide excavators are used for trail construction. The average grade of the trail system is approximately 8 percent, with no grade exceeding 15 percent, and the trail width (singletrack) averages 2 feet in width.

Equipment used for the proposed Saddlecut Road decommissioning would include an excavator, bulldozer, and water tender. All trail work would be by hand.

Cycling lines for switchbacks are typically laid out with a minimum 15-foot radius to control speed and allow for a smooth descent. Initial grades in areas away from streams (non-jurisdictional areas) are made with a small track-mounted excavator. The excavator bucket holds approximately 2 cubic feet of earth, and the arm reaches about 12 feet. Volunteer crews would finish surface grades with hand tools such as picks, rakes, and shovels. With the excavator and volunteer crews of 6 to 12 people, about 300 to 400 feet of trail can be constructed per day. Additional labor would be required in steeper areas, or where structures and erosion control features are needed.

Grade reversals[5] are the key to flow trail design and construction and allow preexisting drainage patterns to cross the trail. Constructing the trail with numerous grade reversals prevents concentrations of runoff by allowing runoff to pass across the trail without affecting the trail bed or water quality in adjacent waterways. Grade reversals are most apparent on downhill switchbacks, where left turns immediately switch to right turns and back again.

Switchback construction would utilize a combination of cuts and compacted fill to construct banked turns for descending bicycles. Water is not allowed to concentrate in the switchbacks and is drained from every turn at the grade reversal. Banked turns typically start as cuts on the top side, and shift to 2- to 4-feet-high compacted fills on the lower side of the turn. At the base of the turn compacted fills diminish, and another grade reversal allows drainage across the trail. Banked turns and the trail bed are ideally constructed with moist soils compacted with portable tampers and compacting machines. Finish trail grading balances cut and fill and is done with hand tools by volunteers.

[5] A grade reversal is where surface drainage crosses a trail because grades shift from the inboard or upslope slide, to the outboard or downslope side of the trail.

Excess graded material would be sidecast[6] in a thin layer (2 to 3 inches) over existing vegetation. Sidecast material may extend 4 to 10 feet beyond the trail surface and is left loose and friable so existing vegetation would reemerge. Most areas over which sidecast materials are spread recover within the subsequent year. Slash is cut up and placed in contact with the ground to speed decomposition. Native seed is spread on the outside of banked turns where fill slopes exceed the ability of vegetation to reemerge. Available leaf litter from the forest floor is spread as mulch over the seeded slopes. Invasive species surrounding the trail construction, such as French broom (*Genista monspessulana*), are removed from within 10 to 15 feet of the trail.

Camp Tamarancho Trail Maintenance

Trail maintenance would continue to be implemented at least twice annually and will involve clearing brush, grass, and dead tree limbs that obstruct trails and maintaining sub-drains, gravel, diversion berms, exit channels, bridges, and buttressing. Maintenance activities are performed using hand tools as described in Section 3.4. Examples of other maintenance efforts performed in the past and anticipated to be required periodically in the future include narrowing areas of "trail widening" using logs to demarcate proper trail limits and jute netting and native soil on disturbed substrates, reinforcing switchbacks turns and downside trail edges (using on-site/native lumber and rebar), and removing invasive plant species on and adjacent to trails.

Best Management Practices/Avoidance and Minimization Measures

The following measures would be integrated into all of the Project components.

Marin County MCSTOPPP Erosion and Sediment Control Plan

Trail construction utilizes BMPs to balance cut and fill, minimize concentrations of surface runoff, and limit potential for erosion. General avoidance and minimization measures implemented during the Project are outlined in the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) Erosion and Sediment Control Plan Application by WRA (2015b; Appendix E). Erosion Control activities are based on the California Stormwater BMP Handbook for Construction (CASQA 2015) and are summarized below and include, but are not limited to, the following:

- Construction of the trail would involve use of grade reversals to minimize concentrations of surface runoff and to maximize opportunities for surface runoff to pass through and across the trail without affecting the trail bed or adjacent drainages. Surface runoff will drain via the grade reversals at every turn.

- Grading would be completed by October 15th to comply with County grading regulations[7] and to avoid excavation during the rainy season. Compaction of the trail to 85 percent is

[6] Sidecast soils are soils that are excavated to create the trail and then spread along-side the trail.

[7] Marin County Code (MCC), Chapter MCC23.08 refers to MCC24.04.627(d), which states that Grading operations shall not be conducted during the rainy season (October 15 through April 15) without prior approval from the agency. Such approval shall only be given upon clear demonstration, to the satisfaction of the agency, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site. When grading operations are permitted during the rainy season, a phasing plan and work schedule shall be required to ensure that the smallest practicable area of erodible land is exposed at any one time and the time of exposure is minimized. The phasing plan

recommended in the Geotechnical Report (MP 2016b) and manual compaction would continue after October 15 during periods of light rain to work with naturally moistened soils.

- All stream crossings would be constructed during periods of low or no stream flow and dry weather.
- All staging, maintenance, and storage of construction equipment would be performed away from the Project site and in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into streams or other waterbodies. No other debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete or washings thereof, or other construction-related materials would be allowed to enter into or be placed where they may be washed by rainfall or runoff into the streams. All such debris and waste will be picked up daily and properly disposed of at an appropriate site.
- The work area would be delineated in sensitive areas as necessary with orange construction fencing to minimize impacts to habitat beyond the work limit.
- Side-slope trails would be with full bench cuts as much as possible to provide the most solid footing for the trail and to better resist surface erosion.
- All trail surfaces and switchbacks would be compacted.

Tree Protection

To protect existing trees, the following measures outlined by WRA (2015b) would be implemented during construction. As described above, no trees are proposed for removal as part of the Project.

- Flag trail alignment to broadly avoid heritage and protected trees.
- If trees require trimming and/or root pruning to accommodate construction, they should be pruned to American National Standards Institute (ANSI) A300 for tree care practices where practical and reasonable.
- If grading takes place within the dripline of the tree, root pruning (cutting with a sharp blade vs. tearing with a bucket) is recommended where possible for roots that are more than 2 inches in diameter.
- Significantly sized limbs and roots that fall within the grading footprint should be further exposed using the least injurious method possible and should be pruned to the branch collar or parent root, taking care to not damage the parent limb or root.
- If non-selective root cutting is unavoidable (e.g., use of a backhoe which will remove all roots in its path), it should be done as far from the trunk as possible.

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and work schedule must be approved by the agency as part of the ESCP prior to the start of grading or prior to October 1 at the discretion of the agency.

Additional precautionary BMPs to prevent the spread of Sudden Oak Death Syndrome (SODs) would be implemented.

Before working:

- Ensure that crews have thoroughly cleaned and sanitized pruning gear and equipment prior to entering the Project area.
- Thoroughly clean and sanitize shoes, pruning gear, and other equipment before working in an area with susceptible species
- Sanitation kits should contain the following: Chlorine bleach [10/90 mixture bleach to water], or Clorox Clean-up®, scrub-brush, metal scraper, boot brush and plastic gloves.
- Susceptible species present within the Project area include coast live oak and California bay.

While working:

- All debris and brush from California bay trees, the primary vector of the Sudden Oak Death pathogen, shall continue to be mulched in place.
- When removing California bay trees, all pruning gear and equipment should be thoroughly cleaned and sanitized before working on coast live oaks.

After working:

- Use all reasonable methods to clean and sanitize personal gear and crew equipment before leaving the Project site. Scrape, brush and/or hose off accumulated soil and mud from clothing, gloves, boots, and shoes. Remove mud and plant debris, especially California bay.
- Restrict the movement of soil and leaf litter from under California bay trees as spores are most abundant on California bay leaves. Contaminated soil, particularly mud and plant debris on vehicle tires, workers boots, shovels, chippers, stump grinders, trenchers, etc., may result in pathogen spread if moved to a new, uninfested site. Thoroughly clean all equipment and wash off soil, mud, and plant debris from these items before use at another site. If complete on-site sanitation is not possible, complete the work at a local power wash facility.
- Tools used in tree pruning may become contaminated and should be disinfected with Lysol® spray, a 70% or greater solution of alcohol, or a Clorox® solution (1 part Chlorox® to 9 parts water or Clorox Clean-up®). Cleaning should be done off site to avoid use, spillage, or disposal of harmful chemicals in the environment.

Protection of Fish, Wildlife, and Plant Resources

The following measures will avoid or otherwise sufficiently minimize impacts to biological resources:

- Trees protected by Marin County Native Tree Preservation and Protection Ordinance[8] will be avoided during trail construction.

- Any cut vegetation will be spread in a thin layer surrounding the trail to improve soil stability and allow the existing vegetation to reemerge quickly without additional planting.

- All equipment, including excavators, hand tools, etc., that may come into contact with invasive plants or the seeds of these plants, will be carefully cleaned before arriving on the site and shall also be carefully cleaned before removal from the site to prevent spread of these plants.

- Construction will take place from outside of the general bird nesting season. This will also preclude any potential for impacts to actively nesting Northern Spotted Owl (NSO).

- To avoid potential incidental impacts to NSO, the use of rodenticides will be prohibited. Additionally, dusky-footed woodrat stick structures shall be left intact wherever they are found to the extent feasible (woodrats are a primary local prey resource).

- Conduct a worker-training program for all field personnel involved Project prior to initiating the Project. The program will consist of a brief presentation by persons knowledgeable in the special-status species, sensitive resource, or invasive plants known from the Project area. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). The program will include a photograph and description of each special-status species, sensitive resource, or invasive plant known from the Project area; and a description of its ecology and habitat needs; an explanation of the measures being taken to avoid or reduce adverse impacts; and the workers' responsibility under the applicable environmental regulation(s) (RTMP Table 6.1 BMP General-9. Conduct Worker Training).

- If it is determined that special-status wildlife species may occur in the Project area, a qualified biologist will survey the area during the appropriate time window to determine the presence or absence of the species. If the species is located, the MCOSD should conduct the recommended activity to avoid impacts to the species. If avoidance is not possible, the appropriate resource agencies will be contacted to obtain guidance or the necessary permits (RTMP Table 6.3 BMP Special-Status Wildlife-2. Preconstruction Surveys).

[8] The Marin County Native Tree Preservation and Protection Ordinance, Chapter 22.75 of the Marin County Municipal Code identifies native oaks (Quercus spp.) and madrones (Arbutus menziesii) as "protected" at six-inches or greater in diameter, and "heritage" at 18 inches or greater in diameter. California bays (Umbellularia californica) and Douglas firs (Pseudotsuga menziesii) are considered "protected" at ten inches or greater, and "heritage" at 30 inches or greater in diameter.

- The MCOSD will undertake the applicable actions described in Table 6.4 BMP Special-Status Plants-2. Avoidance and Protection of Special-Status Plant Species near road and trail management projects, when construction-related road and trail management is planned to occur within or adjacent to special-status plant populations.

Trail Finishing

The following measures would be implemented in the trail finishing process:

- Roughen surface soil, sow native seed where appropriate, and spread available leaf litter and small woody debris on outside edges of compacted embankments.
- Remove sidecast soils (i.e. soils that are excavated to create the trail and then spread along-side the trail) from around base of native trees and shrubs.
- Rake to loosen sidecast soils and continue to encourage reemergence of existing vegetation.
- Continue to remove broom in the proximity of the trail during trail finishing.
- Cut removed brush and distribute on downslopes to be in contact with the ground to speed decomposition.
- Finish grade and compact trail surfaces to prevent pooling of water.
- Install appropriate signage including an identification sign at the top of the trail and appropriate trail intersection signs.

C. CIRCULATION AND REVIEW

This Initial Study/Negative Declaration is being circulated for a 30-day review and comment period pursuant to State CEQA Guidelines Section 15073. It is being circulated to all agencies that have jurisdiction over the subject property or the natural resources affected by the proposed Project and to consultants, community groups, and interested parties to attest to the completeness and adequacy of the information contained in the Initial Study as it relates to the concerns which are germane to the agency's or organization's jurisdictional authority or to the interested parties' issues.

Marin County Agencies:

- Marin County Community Development Agency: Lead Agency - Design Review
- Marin County Department of Public Works: Responsible Agency - Grading Permits
- Marin County Open Space District: Responsible Agency - Approval of portions of

Saddlecut trail and road to be constructed on MCOSD's White Hill Open Space lands

Town of Fairfax

- Encroachment Permit for trail exit onto Iron Springs Road

Other Trustee and Responsible Agencies:

- San Francisco Bay Regional Water Quality Control Board: Responsible Agency - Waste Discharge Requirements
- California Department of Fish and Wildlife: Responsible Agency - Section 1602 Streambed Alteration Agreements (for new bridges)

Federal Agencies

- No federal permits needed.

[1, 2, 3]

III. EVALUATION OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to Section 15063 of the State CEQA Guidelines and the County EIR Guidelines, Marin County will prepare an Initial Study for all projects not categorically exempt from the requirements of CEQA. The Initial Study evaluation is a preliminary analysis of a project which provides the County with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration. The points enumerated below describe the primary procedural steps undertaken by the County in completing an Initial Study checklist evaluation and, in particular, the manner in which significant environmental effects of the Project are made and recorded.

A. The determination of a significant environmental effect is to be based on substantial evidence contained in the administrative record and the County's environmental data base consisting of factual information regarding environmental resources and environmental goals and policies relevant to Marin County. As a procedural device for reducing the size of the Initial Study document, relevant information sources cited and discussed in topical sections of the checklist evaluation are incorporated by reference into the checklist (e.g. general plans, zoning ordinances). Each of these information sources has been assigned a number which is shown in parenthesis following each topical question and which corresponds to a number on the data base source list provided herein as Attachment 1. See the sample question below. Other sources used or individuals contacted may also be cited in the discussion of topical issues where appropriate.

B. In general, a Negative Declaration shall be prepared for a project subject to CEQA when either the Initial Study demonstrates that there is no substantial evidence that the project may have one or more significant effects on the environment. A Negative Declaration shall also be prepared if the Initial Study identifies potentially significant effects, but revisions to the project made by or agreed to by the applicant prior to release of the Negative Declaration for public review would avoid or reduce such effects to a level of less than significance, and there is no substantial evidence before the Lead County Department that the project as revised will have a significant effect on the environment. A signature block is provided in Section VII of this Initial Study to verify that the project sponsor has agreed to incorporate mitigation measures into the project in conformance with this requirement.

C. All answers to the topical questions must take into account the whole of the action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Significant unavoidable cumulative impacts shall be identified in Section V of this Initial Study (Mandatory Findings of Significance).

D. A brief explanation shall be given for all answers except "Not Applicable" answers that are adequately supported by the information sources the Lead County Department cites in the parenthesis following each question. A "Not Applicable" answer is

adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "Not Applicable" answer shall be discussed where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

E. "Less Than Significant Impact" is appropriate if an effect is found to be less than significant based on the project as proposed and without the incorporation of mitigation measures recommended in the Initial Study.

F. "Potentially Significant Unless Mitigated" applies where the incorporation of recommended mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead County Department must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section IV, "Earlier Analyses," may be cross-referenced).

G. "Significant Impact" is appropriate if an effect is significant or potentially significant, or if the Lead County Department lacks information to make a finding that the effect is less than significant. If there are one or more effects which have been determined to be significant and unavoidable, an EIR shall be required for the project.

H. The answers in this checklist have also considered the current State California Environmental Quality Act Guidelines and Appendix G contained in those Guidelines.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a “potentially significant impact” as indicated by the checklist on the following pages. No significant environmental impacts were identified in the Initial Study for any of the 21 categories listed below.

- ☐ Aesthetics
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Energy
- ☐ Geology and Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards and Hazardous Materials
- ☐ Hydrology and Water Quality
- ☐ Land Use and Planning
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population and Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities and Service Systems
- ☐ Wildfire
- ☐ Mandatory Findings of Significance

Environmental Impact Checklist

1. Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	X	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	X	☐
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	X	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	X

a) Have a substantial adverse effect on a scenic vista?

None of the Project elements involve the construction of any buildings or any actions which would reduce, obstruct, or degrade scenic views because no large or tall structures are proposed. Rather all of the Project elements involve narrow trails similar to nearby trails, and wooden bridges and boardwalks that blend in with the surrounding wooded landscape. The largest bridge, which is elevated and 24 feet long, would be visible from the bike path and possibly looking upslope from Iron Springs Road, but also would not substantially alter the area's visual character or views.

During construction, minor visual impacts may occur to those using the trails inside the Camp and in on the adjacent White Hill Open Space area. These impacts would be visible only to trail users in those areas, and not from off-site. In addition, these impacts would be temporary and, upon revegetation of trail work areas and restoration of the

decommissioned trails and fire road, there would be no noticeable adverse effects to aesthetic resources. Restoration of the eroding Saddlecut fire road would improve aesthetics in that area. No tree removal is proposed. Accordingly, the Project elements would not result in any significant impacts on scenic vistas.

The end of Caballo Rojo Trail would be visible from Iron Springs Road. The trail, the three-foot tall wooden retaining wall, and the split rail fence would all be consistent with the visual character of other existing trails currently visible from Iron Springs Road. After construction, some embankments at the bottom of Caballo Rojo Trail would be exposed and would contrast with the existing forest vegetation when viewed from Iron Springs Road. Still the components of the trail are consistent with the visual character of the area, and the contrast of the trail would be visible only to passers-by for a limited duration and would diminish over time, therefore the impact to the visual character is less than significant.

Therefore, this impact would be **less than significant** for all of the Project elements.
[1, 2, 3]

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

None of the project elements are located in a viewshed of a scenic highway. In addition, no trees or rock outcrops would be affected. Therefore, this impact would be **less than significant** for all of the Project elements.
[1, 2, 3]

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

See responses to Items (a) and (b), above. None of the Project elements would have the potential to degrade visual quality. The impact of the Project would be **less than significant**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

None of the Project elements would include any lighting, either permanent or temporary, so it would have no light or glare impacts. Therefore, **no impact** would occur.
[1, 2, 3]

2. Agriculture and Forestry Resources

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	X

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Although the Camp Tamarancho site is designated as Agricultural/Conservation, it has long been used as a recreational facility and there is no farmland on the site. The MCOSD White Hill Open Space Preserve lands affected by the Saddlecut Trail Project element also are zoned Agricultural/Conservation. The 100 Iron Springs Road parcel, where the Lower Caballo Rojo Project element would be implemented, is designated Low Density Residential. Therefore, the Project would have **no impact** to any farmland resources. [4]

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed improvements are consistent with the Tamarancho and White Hill Open Spaces sites' agricultural zoning (See Land Use and Planning section for a detailed discussion of this). There are no Williamson Act contracts on any of the Projects sites. There are no agricultural uses on the sites. Therefore, **no impacts** would occur with respect to existing zoning for agricultural use or Williamson Act contracts.
[4]

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

See Items (a) and (b), above. None of the Project sites are designated for Timber Production. The Project would have **no impact** on forest or timber lands.

d) Result in the loss of forest land of conversion of forest land to non-forest use?

See Item (c) above. In addition, the Project would not convert any forest lands to other uses. **No impact** would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

See Items (a)-(d), above. The construction of the proposed trail segments and decommissioning of fire road and trail segments would have no effect on forest or agricultural lands, and no conversion to other uses would occur. Therefore, **no impact** would occur.

3. Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	☐	☐	X	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	X	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	X	☐

a) Conflict with or obstruct implementation of the applicable air quality plan?

In the Bay Area, the current applicable regional air quality plan is the Bay Area Air Quality Management District's (BAAQMD's) *2017 Clean Air Plan: Spare the Air, Cool the Climate* (Plan),[9] which focuses on two main goals: protecting regional public health from air pollutant exposure and protecting the global climate from greenhouse gas (GHG) emissions (the latter addressed in Section 8 below). The Plan defines control strategies to reduce emissions of ozone precursors, particulate matter, other toxic air contaminants (TACs; the most important of which is defined in the Item (c) discussion below), and GHG based on four key priorities:

- Reduce emissions of criteria air pollutants and TACs from all key sources.
- Reduce emissions of carbon dioxide (CO2) and other major GHGs.
- Decrease demand for fossil fuels.
- Decarbonize the energy system.

The Project site's existing outdoor recreation facilities, consisting of individual/group camping facilities and mountain bike trails, have minimal air pollutant emissions and the

[9] https://www.baaqmd.gov/en/plans-and-climate/air-quality-plans/current-plans

lack of existing on-site parking facilities restricts motor vehicle access and their pollutant emissions. The Project would install improvements to three sections of the existing bike trails to enhance rider safety, repair damage to the terrain from past mountain bike use, and avoid eroding areas and sensitive habitats. No new on-site stationary air pollutant sources would be added. Site access roads and on-site motor vehicle parking would not be improved/expanded. Project-generated future pollutant/GHG emissions would remain minimal, have no appreciable effect on Plan regional emission inventories, nor require emission control measures as mitigation to assure continued Bay Area compliance with the State Implementation Plan. Therefore, the Project would not have the potential to conflict with or obstruct the BAAQMD's 2017 Plan, and **no impact** would occur.
[5, 6,10]

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

According to the BAAQMD, Marin County is a distinct climatological sub-region of the Bay Area air basin. The air pollution potential is highest in eastern Marin where most of its population resides. In the south and west County, where the influence of marine air is greatest, air pollutant levels are relatively low at most times, but increase as one moves to the County's northern interior. Marin County has few large-scale air polluting industries, rather most of the air pollutants affecting its population come from motor vehicles — especially from traffic using Highway 101 and the major arterial roadways connecting to it.

The Project site is located in rural, south-central Marin County where the predominant land use is recreational open space; low-density residential and some commercial areas predominate along the site's major access roads. The BAAQMD's *Stationary Source Screening Map* shows that the only local stationary air pollutant sources operating under BAAQMD permits are a few gas stations in/near the towns of Woodacre and Fairfax all more than 2 miles distant from the site. Sir Francis Drake Boulevard, the largest local transportation source of air pollutants, passes more than 1,000 feet to the north of the site.

Ozone and suspended particulate matter (i.e., two types of the latter - particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]) are air pollutants of particular concern in the Bay Area, which is currently designated "nonattainment" for state and national ozone ambient air quality standards, for the state PM_{10} standards, and for state and national $PM_{2.5}$ standards. Violations of the particulate standards have become more frequent throughout the Bay Area in recent years because of the increasing influence of wildfires in California and the western United States.

The air quality analysis addressing this Initial Study checklist items was performed using the methodologies and significance thresholds recommended in *CEQA Air Quality Guidelines* (*Guidelines*; BAAQMD [2022], Chapter 3, *Thresholds of Significance*, and

Chapter 5, *Project-Level Air Quality Impacts*). The air pollutant impacts evaluated below are from ozone precursors (i.e., reactive organic compounds [ROG] and nitrogen oxides [NO_x]) and small-diameter particulate matter (i.e., PM_{10} and $PM_{2.5}$) in construction equipment exhaust.

According to the *Guidelines*, any Project would have a significant potential for obstructing air quality plan implementation or making a cumulatively considerable contribution to a regional air quality problem if its pollutant emissions would exceed any of the thresholds presented in **Table AQ-1**.

TABLE AQ-1: BAAQMD Significance Thresholds for Air Pollutant Emissions

Pollutant	Construction Average Daily (lbs./day)	Operational	
		Average Daily (lbs./day)	Maximum Annual (tons/year)
Reactive Organic Gases (ROG)	54	54	10
Oxides of Nitrogen (NO_x)	54	54	10
Inhalable Particulate Matter (PM_{10})	82 (exhaust)	82	15
Fine Inhalable Particulate Matter ($PM_{2.5}$)	54 (exhaust)	54	10
PM_{10}/$PM_{2.5}$ (Fugitive Dust)	BMPs	N/A	N/A

Notes:
BMPs = Best Management Practices. N/A = Not Applicable
Source: Bay Area Air Quality Management District, *CEQA Air Quality Guidelines (2022)*.

The primary source of air pollutants associated with the Project would be from engine-powered construction equipment, from trucks that would deliver construction supplies, and from the motor vehicles of the commuting construction crew. The clearing/construction/grading activities for the trails would be done largely with hand tools and a small track-mounted excavator.

The *Guidelines* recommend quantification of Project emissions and their comparison with the CEQA significance thresholds. For this, the California Emissions Estimator Model (CalEEMod, Version 2020.4.0) provided the construction equipment emission rates that were used with Project-specific equipment data and work crew size specifications to estimate Project construction emissions. **Table AQ-2** shows the estimated exhaust air-pollutant emissions from construction equipment and worker commute vehicles in comparison to the BAAQMD CEQA significance thresholds.

TABLE AQ-2: Project Construction Pollutant Emissions (Average Pounds per Day)

Construction Source	ROG	NOx	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
Powered Equipment (Small excavator)	0.059	0.435	0.017	0.015
Worker Commute (9 worker daily average over 10 weeks for all Project phases)	0.004	0.011	0.001	0.001
Significance Thresholds	**54**	**54**	**82**	**54**
Significant Impact?	**No**	**No**	**No**	**No**

Emissions from this equipment over this short duration would be far below BAAQMD's individual project and cumulative significance thresholds and therefore be considered a **less-than-significant** impact.
[5, 6]

c) Expose sensitive receptors to substantial pollutant concentrations?

In addition to the major air pollutants (as identified above), many other chemical compounds, generally termed TACs, pose a present or potential hazard to human health through airborne exposure. A wide variety of sources, stationary (e.g., dry cleaning facilities, gasoline stations, and emergency diesel-powered generators, etc.) and mobile (e.g., motor vehicles, construction equipment, etc.), emit TACs. TACs can cause adverse health/welfare effects from long-term exposure (e.g., cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage) and/or from short-term exposure (e.g., eye watering, respiratory irritation, running nose, throat pain, and headaches). Most of the estimated carcinogenic/chronic health risk in California can be attributed to relatively few airborne compounds, the most important being particulate matter from diesel-fueled engines (DPM). The California Air Resources Board (CARB. *Summary: Diesel Particulate Matter Health Impacts*) has identified DPM as being responsible for about 70 percent of the cumulative cancer risk from all airborne TAC exposures in California.

However, given Project circumstances, the cancer risk/chronic hazard/fine particulates from its construction equipment DPM emissions would be far below the BAAQMD significance thresholds for the following reasons: 1) the sparse use of diesel-powered equipment for Project construction (i.e., only a small excavator would be needed for one phase of road/trail construction; only hand tools for the other phases); 2) the relatively short times powered equipment would be active; and 3) the relatively long distances between the road improvement sites and the few, nearest off-site residences (i.e., greater than 1,000 feet from the work activity areas). Cancer risk is typically evaluated over a reference 70-year exposure period, while chronic hazard and particulate exposures are judged over at least year-long exposures. Thus, there would be a less-than-significant

health risk to local sensitive receptors from ambient exposure to DPM from Project construction.

After it is operational, the Project would not include any new stationary TAC emission sources nor accommodate any substantial increased traffic flows on site access roads. Therefore, this impact would be less than significant.

To reduce the exposure of local sensitive receptors to PM_{10} and $PM_{2.5}$ in the fugitive dust released during Project construction, the *Guidelines* require that all Bay Area construction projects implement BAAQMD Best Management Practices (BMPs) to control fugitive dust emissions, which are equivalent to the following policies (§22.20.040) from the Marin County Code Standards and Countywide Plan:

> *"Outdoor construction activities that require Building Permits shall meet the standards enumerated below in addition to any other requirements imposed by Federal, State, or local agencies.*
>
> *"Dust and Emission Control. The following dust and emission control measures shall apply to projects involving ground disturbance that are subject to environmental review:*
>
> *All unpaved exposed surfaces (e.g., parking areas, staging areas, soil piles, and graded areas, and unpaved access roads) shall be watered two times a day.*
>
> *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*
>
> *All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.*
>
> *All vehicle speeds on unpaved roads shall be limited to a maximum of 15 miles per hour.*
>
> *All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.*
>
> *Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California of Regulations). Clear signage shall be provided for construction workers at all access points.*
>
> *All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified emissions evaluator."*
> [5, 6, 7, 8, 9, 10]

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No existing facilities/activities on the Project site emit any objectionable odors. The same would hold for odor sources during Project construction with the exception of exhaust emissions from the small track-mounted excavator. Roadway and trails sections would be closed to the public during excavator use and there are no odor-sensitive receptors near to the active work areas. Other road/trail maintenance activities would be done with hand tools and no motorized vehicles would use the trails. Therefore, this impact would be **less than significant**.

4. Biological Resources

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game 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, regulations or by the California Department of Fish and Game 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?	☐	☐	☐	☒

Background

Vollmar Natural Lands Consulting (VNLC) conducted a biological resources evaluation of the three trail sites and adjacent areas to identify sensitive species and habitats. This section is based on that assessment. VNLC biologists conducted field surveys, preceded by a query of the California Native Plant Society (CNPS) Rare Plant Inventory to create a scoping list of all special-status plant species, including the seven United States Geological Survey (USGS) Quadrangles around the San Rafael Quadrangle (which encompasses all Proposed Trails). Regional special-status wildlife occurrence documentation was compiled from the California Natural Diversity Database (CNDDB), including occurrences within a five-mile radius of the Project site. In addition, the US Fish and Wildlife Service's Information for Planning and Consultation (iPac) database of federally listed special-status species was consulted to specifically assess federally protected species that could occur within the Project site. Additionally, VNLC biologists reviewed previous biological resource assessments of the Camp Tamarancho trails and adjacent Saddlecut trail/fire road areas, including:

- PCI, 2022: "Biological Resource Assessment White Hill Preserve Saddlecut Trail Project"
- WRA, 2022a: "Project Description for Caballo Rojo Trail"
- WRA, 2022b: "Camp Tamarancho Mountain Bike Trail System CEQA Project Description"
- WRA, 2023: "Technical Memorandum; Tree Assessment for Caballo Rojo Mountain Bike Trail"

Finally, a VNLC biologist conducted a site visit in September 2024, and assessed the proposed trails and roadway decommissioning sites for special-status wildlife and plant species, as well as their habitats. The biologist recorded observations of dominant plant communities, plant and animal species (with emphasis on rare and endangered species) or their sign (including nests, burrows, tracks, scat, etc.), and the suitability of on-site habitats and those immediately adjoining the Project site to support special-status plant or animal species.

For the purposes of this analysis, sensitive biological resources include the following:

- Plants or animals that are listed as rare, threatened, or endangered or as species of special concern, pursuant to federal or state law (including the California and federal Endangered Species Act and California fully protected species), plants listed as having special status by the CNPS, and habitat essential to federally protected species of plants or wildlife;
- Natural communities indicated as rare or threatened by the California Natural Diversity Database (CNDDB) maintained by California Department of Fish and Wildlife (CDFW);
- Wetlands and streams, and the riparian vegetation surrounding them likely subject to U.S. Army Corp of Engineers (USACE), San Francisco Regional Water Quality Control Board (SFRWQCB), and CDFW jurisdiction; and

- Natural resources, communities, and associated buffers protected pursuant to applicable plans, policies, and regulations.

Vegetation Communities

The proposed trail areas support the following vegetation communities:

a) *Lower Caballo Rojo Trail Project*

Mixed Evergreen Forest: The entirety of this section of proposed trail goes through mixed evergreen forest with low potential for special-status species and a high abundance of French broom (*Genista monspessulana*), which crowds out many native species in the understory and can pose a high fire risk. Stands of French broom had been cut back at the time of the tour. The dominant trees include California bay (*Umbellularia californica*), coast live oak (*Quercus agrifolia*), Pacific madrone (*Arbutus menziesii*), Douglas fir (*Pseudotsuga menziesii*), and coast redwood (*Sequoia sempervirens*), which provide full shade in the understory and dense litter cover. A sparse shrub and herbaceous layer is present with a few native species including sticky monkey flower (*Diplacus aurantiacus*), western sword fern (*Polystichum munitum*), and rough hedge nettle (*Stachys rigida*), as well as weedy non-native species such as dogtail grass (*Cynosurus echinatus*).

b) *Saddlecut Road to Trail Project*

Coyote Brush (*Baccharis pilularis*) Scrub: The road to be decommissioned is bare soils and is surrounded by coyote brush scrub.

Annual and Native Grassland: The proposed trail would pass through grasslands on both the northwestern and southwestern ends. Most of this grassland (especially in the northern portion) is dominated by non-native species including oats (*Avena barbata, A. fatua*), bromes (*Bromus hordeaceus, B. diandrus*), and fescue (*Festuca myuros, F. microstachys*) grasses; however, there are several stands of more intact native perennial bunchgrasses, mostly purple needlegrass (*Stipa pulchra*), that are present within the grassland, as well as a rock outcrop. Some stands of the native grasses meet the requirements to be classified as Needle grass – Melic grass Grassland Alliance, which is a S3S4 G3G4 sensitive community (CDFW, 2024). The outcrop and these patches of native grasses are sensitive and provide microhabitat potential for special-status species. Additionally, there are small coyote brush individuals throughout, with bare patches of soil near their bases that offer some potential for special status species, such as Mt. Tamalpais leessingia (*Lessingia micradenia* var. *micradenia*) and other rare annual forbs that favor bare patches of soil.

Intergrade between Grassland, Douglas Fir Forest, and Coast Live Oak Woodland: The proposed trail enters the forest from Blue Ridge Road along the southern part of the reroute. At this point, the proposed trail passes through an ecotone between native grassland, coast live oak woodland, and Douglas fir forest, which results in this area having a high diversity of plant species, filtered shade, and various pockets of

microhabitat. This sort of intergrade between multiple habitat types has high potential for special status species, which are further discussed in the **Special-status Plants** section below.

Mixed Evergreen Forest: Mixed evergreen forest is located along the eastern portion of the trail reroute which is mostly dominated by California bay and has a dense layer of bay leaf litter preventing much of an understory from being established. The combination of dense shade and dense litter makes this low potential habitat for special-status species.

c) *Broken Dam Trail Reroute Project*

Coast Live Oak Woodland: The proposed trail enters from the south and exits to the west through coast live oak woodland that has low potential for special status species. The overstory is dominated by coast live oak but has a reasonable diversity of other tree species including California bay, Pacific madrone, and some emergent Douglas fir. Shrubs include some coyote brush, sticky monkeyflower, and poison oak (*Toxicodendron diversilobum*) along the woodland margins. The herbaceous layer includes dogtail grass, woodland brome (*Bromus laevipes*), coastal woodfern (*Dryopteris arguta*), and rough hedgenettle.

Annual and Native Grassland: A small stretch of the northern portion of the proposed trail passes through grassland that has a few patches predominantly native grasses, mainly purple needlegrass and annual grasses similar to those observed in the Saddlecut reroute. Similarly, there are some prominent rock outcrops and areas with thin soils that appear to have higher potential for special status species. The proposed trail avoids the grassland as much as possible and stays in the oak woodland where the potential for these species is lower.

Impacts Discussion

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

The proposed trails construction footprint passes through potential special-status species habitat, including special-status plants and a number of wildlife species. As such, the Project could result in potential impacts including noise disturbance, vegetation removal, or potential habitat degradation due to the opportunity to spread non-native invasive species or pathogens (such as Sudden Oak Death). However, the incorporation of multiple avoidance and minimization measures (as detailed for each species, below), brings the expected level of impact to a **less-than-significant** level for sensitive biological resources.

A discussion of the proposed Project's potential effects on special-status species and the resultant level of impacts is provided below.

Special-Status Species

CNDDB wildlife occurrences and iPac species recommendations are compiled in **Table BIO-1,** and each species was assessed for its likelihood of occurring on or immediately adjacent to the Site. CNDDB maps of plant and wildlife regional occurrences are included in **Figures BIO-1** and **BIO-2**, respectively. Special-status plants and wildlife that may occur along the proposed new trails are summarized below.

Special-Status Plants

VNLC biologists reviewed 110 vascular plants identified by the CNPS nine-quad search (CNPS, 2024) and identified ten special-status plants with some potential to occur along the proposed trail alignments. These are listed in **Table BIO-2,** below.

Habitats with moderate to high potential to support special-status plants are present on the Saddlecut Trail re-route and Broken Dam Trail re-route alignments. The entirety of the Lower Caballo Rojo Trail alignment has a very low potential to support special-status species, especially since it is heavily invaded by French broom, which is crowding out understory natives. Native grasslands and ecotones between the grassland and woodland within the Saddlecut and Broken Dam proposed trail alignments have moderate to high potential to support special-status species. The grasslands within these areas have both rock outcrops and areas with thinner soils (some of which may have serpentine influence) that could support rare annual herbaceous species. In addition, the ecotone between the grassland and woodlands provides microhabitats and openings that could support special-status plant species.

Table BIO-1. Special-Status Plants with Potential to Occur in the Vicinity of Proposed Trail Improvements

Species	Status	Habitat	Occurrence Potential
Amorpha californica var. *napensis* Napa false indigo (Fabaceae)	None/None/1B.2	Broadleafed upland forest (Openings), Chaparral, Cismontane woodland; 165-6560 feet; Apr-Jul	High, suitable habitat is present and multiple occurrences within 1 miles of Proposed Trails
Amsinckia lunaris bent-flowered fiddleneck (Boraginaceae)	None/None/1B.2	Cismontane woodland, Coastal bluff scrub, Valley and foothill grassland; 10-1640 feet; Mar-Jun	High, suitable habitat is present and there is an occurrence 1.25 miles from the Proposed Trails
Arctostaphylos montana ssp, *montana* Mt. Tamalpais manzanita (Ericaceae)	None/None/1B.3	Chaparral, Valley and foothill grassland; Microhabitat: Rocky, Serpentine; 525-2495 feet; Feb-Apr	Documented in Saddlecut reroute (need flowers for conclusive ID). Moderate, marginal suitable habitat present and documented elsewhere within Tamaramcho.

Fritillaria liliacea fragrant fritillary (Liliaceae)	None/None/1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland; Microhabitat: Serpentine (often); 10-1345 feet; Feb-Apr	Low, marginal microhabitat and nearest occurrence is almost 5 miles away
Lessingia hololeuca woolly-headed lessingia (Asteraceae)	None/None/3	Broadleafed upland forest, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Microhabitat: Clay, Serpentine; 50-1000 feet; Jun-Oct	Low, not much data on this California Rare Plant Rank (CRPR) 3 species, but VNLC biologists have identified it outside of strict serpentine habitat.
Lessingia micradenia var. *micradenia* Tamalpais lessingia (Asteraceae)	None/None/1B.2	Chaparral, Valley and foothill grassland; Microhabitat: Roadsides (often), Serpentine (usually); 330-1640 feet; (Jun) Jul-Oct	Moderate, VNLC biologists encountered this species along Broken Dam trail (on serpentine), 0.5 miles away from Saddlecut. It could be found on non-serpentine shallow soils.
Microseris paludosa marsh microseris (Asteraceae)	None/None/1B.2	Cismontane woodland, Closed-cone coniferous forest, Coastal scrub, Valley and foothill grassland;15-1165 feet; April-June (Jul)	Moderate, suitable habitat is present
Pentachaeta bellidiflora white-rayed pentachaeta (Asteraceae)	FE/CE/1B.1	Cismontane woodland, Valley and foothill grassland (often serpentinite); 115-2035 feet; Mar-May	Low, suitable habitat present but nearest occurrences are over 3 miles away
Quercus parvula var. *tamalpaisensis* Tamalpais oak (Fagaceae)	None/None/1B.3	Lower montane coniferous forest; 330-2460 feet; Mar-Apr	Low, marginal habitat
Trifolium amoenum two-fork clover (Fabaceae)	FE/None/1B.1	Coastal bluff scrub, Valley and foothill grassland (sometimes serpentinite); 15-1360 feet; Apr-Jun	Moderate, suitable habitat present and documented within 3 miles of Proposed Trials

The previous biological assessment of the Saddlecut trail reroute area concluded that special-status plants were “not likely to occur” within the path of the proposed trail (PCI, 2022). However, VNLC identified stands of special-status native grasslands in the area of the proposed Saddlecut Trail reroute. VNLC’s biologist also identified a population of 10 to 20 low-growing manzanitas that were tentatively identified as the Mt. Tamalpais manzanita (*Arctostaphylos montana* ssp. *montana*) within an intergrade woodland and grassland habitat along the Saddlecut trail reroute alignment. This special-status plant has a California Rare Plant Rank

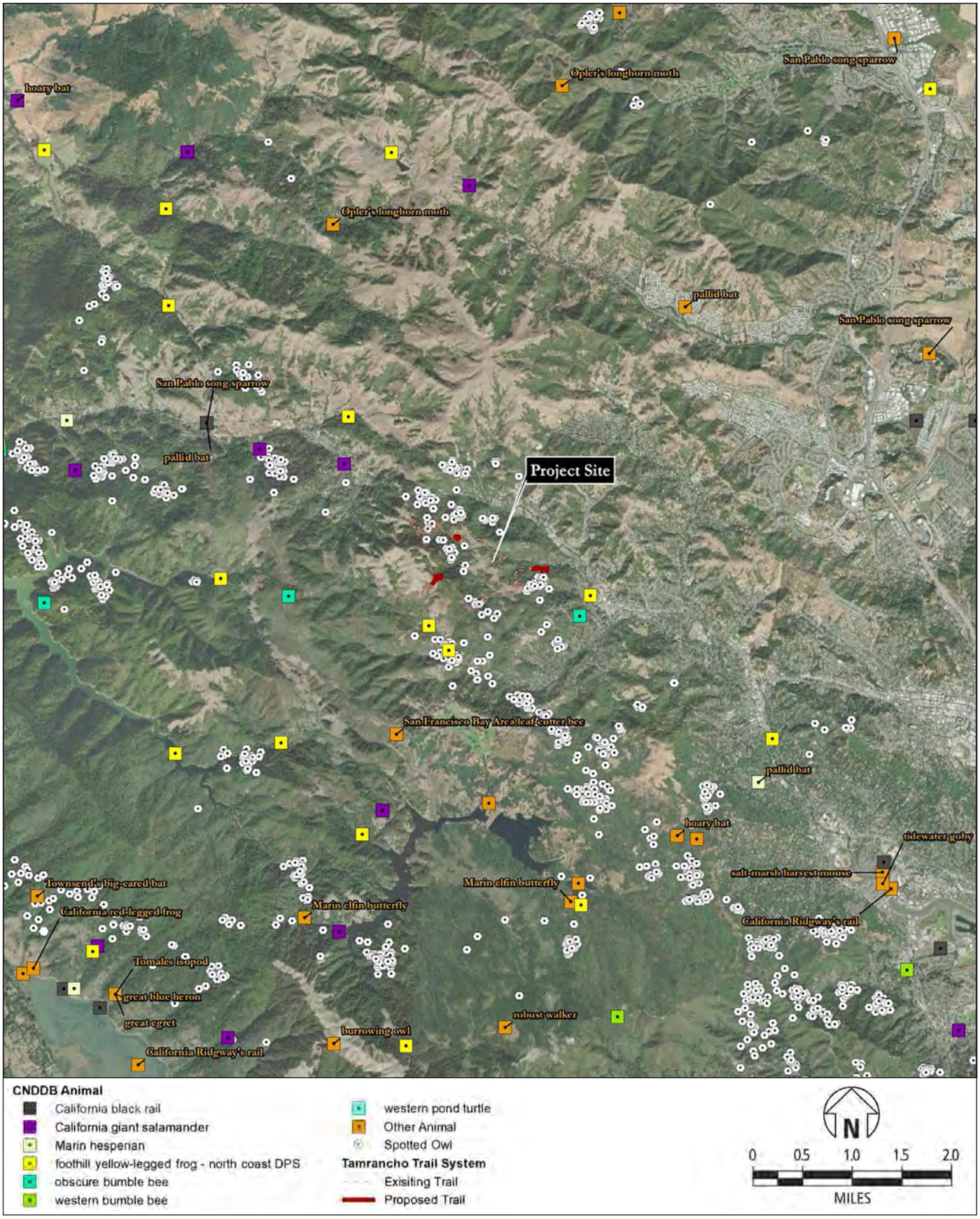

Figure Bio-1

CNDDB Wildlife Occurences

Source: Vollmar Natural Lands Consulting

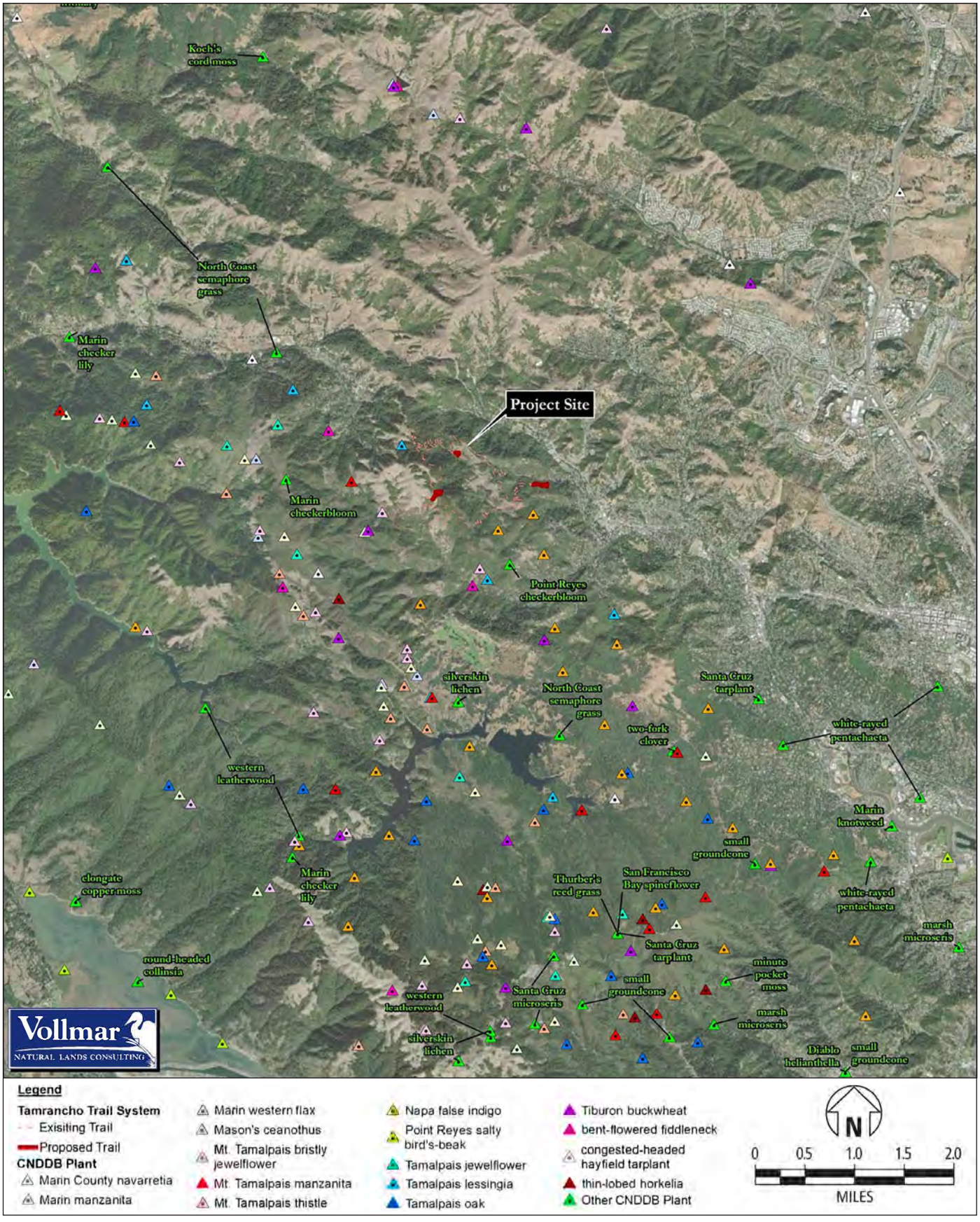

Figure Bio-2

CNDDB Plant Occurences

Source: Vollmar Natural Lands Consulting

(CRPR) rank of 1B.3and no federal or state listing. Although it is primarily found in chaparral and grassland habitats, it has also been documented within woodlands and is known to be found elsewhere within Camp Tamarancho. Although the identification of this plant was not fully conclusive, since no flowers were available at the time of the visit (this species blooms from February to April), other characteristics such as the leaves, stems, root (non-burl), and fruit were consistent with the professionally accepted species description for Mt. Tamalpais manzanita (Baldwin, 2012). Thus, it should be treated as a special-status plant, until it is revisited during a time when it is flowering. The applicant has stated that native grasses and the stand of Mt. Tamalpais manzanita (*Arctostaphylos montana ssp. montana*) would be located and protected during construction. If necessary, trail alignments would be adjusted to ensure avoidance and protection[10].

Potential impacts to special-status plant species could include trampling, soil disturbance, or introduction of non-native, invasive plant species. However, since the Project is incorporating a number of measures to protect plant resources, including conducting a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), measures to avoid impacts to special-status plant species during construction (RTMP Table 6.4 BMP Special-Status Plants-2.
Avoidance and Protection of Special-Status Plant Species near Road and Trail Management Projects), as well as measures to clean all equipment prior to use to limit the spread of invasive plants, the impacts to special-status plant species would be **less than significant**.

Special-Status Wildlife and Critical Habitat

Eight animal species with State or Federal protection have some potential to occur within or adjacent to the Project Site. These are described below and summarized in **Table BIO-2.**

Cooper's hawk (*Accipiter cooperi*). Cooper's hawks are a State Watchlist species. This species is a medium-sized hawk of mature forest, open woodlands, and brushlands. They feed primarily on birds and small mammals and nest in tall trees or along edges and openings. Breeding season is typically from February through August in Marin County. Cooper's hawks have been documented on the White Hill Preserve by Marin County staff (MCOSP 2015).

Potential impacts to this species could include disturbance during the nesting season resulting in the abandonment of nests and loss of eggs or chicks. However, with the Project's incorporation of avoidance and minimization measures including Marin County Code 22.20.040 G. Nesting Bird Protection Measures, as well as the measure included in the Project Description stating that construction would take place from outside of the general bird nesting season, and a worker-training program (RTMP Table 6.1 BMP

[10] Michael Dybeck, Scouting America, Marin Council, March 28 2025 comment letter on Draft Initial Study.

Table BIO-2. Special-status Animal Species Documented on or in the Vicinity of Camp Tamarancho[1]

Common Name Scientific Name	Status[2]	Description of Habitat Requirements	Potential to Occur in Study Area
Amphibians			
California giant salamander *Dicamptodon ensatus*	SSC	Primarily in humid coastal forests, especially in Douglas fir, redwood, red fir, and montane and valley-foothill riparian habitats. They live in or near streams in damp forests. Aquatic adults and larvae are found in cool, rocky streams and occasionally in lakes and ponds. Terrestrial adults are found under surface litter and in tunnels underground.	Low - This area shows suitable forested habitat.
California red-legged frog *Rana draytonii*	FT, SSC	Breeds in perennial and seasonal ponds and quiet pools in slow-moving freshwater streams; shelters in adjacent uplands and shrubby or emergent riparian vegetation. Prefers shorelines with extensive vegetation. Requires permanent or nearly permanent pools for larval development.	Not Expected. No suitable streams or other habitat are present in the vicinity of the Study Area.
foothill yellow-legged frog - north coast Distinct Population Segment *Rana boylii*	SSC	Occurs in partially shaded and shallow streams with a rocky substrate in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Requires aestivation habitat and enough permanent water for larval development.	Not Expected. No suitable streams or forest habitat for adults or larvae are present in the vicinity of the Study Area.
Birds			

Common Name **Scientific Name**	**Status**[2]	**Description of Habitat Requirements**	**Potential to Occur in Study Area**
Northern Spotted Owl Strix occidentalis caurina	FT, ST	Dense blocks of mature, multi-layered forests of mixed conifer, redwood, and Douglas-fir habitat.	High. Coastal populations have been found in younger forests which match characteristics of the study area.
Marbled Murrelet *Brachyramphus marmoratus*	FT, SE	Nests in old-growth conifer forests near the ocean. Forage near shorelines but also far offshore.	Not Expected. The Study area does not overlap with the critical habitat.
Cooper's Hawk Accipiter cooperii	WL	Nests in coastal live oaks and other forest habitat, may use large trees in suburban and urban settings.	High. The study area is ideal for this species that prefers woodlands.
Grasshopper Sparrow *Ammodramus savannarum*	SSC	Frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Uses scattered shrubs for singing perches.	Moderate. This species has been recorded at a sight close to the Study Area.
White-tailed Kite *Elanus leucurus*	FP	Savannas, open woodlands, marshes, desert grasslands, cleared lands, and cultivated fields. Nest in upper parts of trees growing either in isolation or at the edge of a forest. Forages in undisturbed open grasslands, meadows, farmlands, and emergent wetlands.	High. This species has been recorded at a sight close to the Study Area.
Insects			
monarch - California overwintering population *Danaus plexippus plexippus pop. 1*	FC	Roosts in wind-protected tree groves with nectar and water nearby. Overwinters in tall trees in large groups during migration. Forages on showy nectar source flowers. Breeds on milkweed (Asclepias sp.) vegetation.	Not Expected. The Study Area has very little suitable habitat for this species.

Common Name Scientific Name	Status[2]	Description of Habitat Requirements	Potential to Occur in Study Area
western bumble bee Bombus occidentalis	SCE	Occurs in prairie grasslands, wet and dry meadows, shrublands, and open forests where wildflowers are abundant. Nest in underground cavities or animal burrows. Forage and overwinter in meadows and grasslands with abundant flowers. Requires blooming plants that supply adequate nectar and pollen from February through November.	Moderate. The Study Area has very suitable habitat for this species.
Mammals			
pallid bat Antrozous pallidus	SSC	Occurs in mountainous areas, intermontane basins, lowland desert scrub, arid deserts, and grasslands, often near rocky outcrops and water; in some areas, this species also inhabits open coniferous forest and woodland. Prefers open dry lands with rocky areas for roosting. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, hollow trees, and various human structures such as bridges, barns, porches, bat boxes, and buildings.	Moderate. The Study Area has suitable habitat for this species.
Townsend's big-eared bat Corynorhinus townsendii	SSC	Occurs in a wide variety of habitats including grasslands, shrublands, oak woodlands, and forests. Prefers mesic habitats. Roosts in caves, cliffs, rock ledges, tunnels, mines, and man-made structures. On the West Coast, they are found regularly in forested regions and buildings, and in areas with a mosaic of woodland, grassland, and/or shrubland.	Moderate. The Study Area has suitable habitat for this species.

Common Name Scientific Name	Status[2]	Description of Habitat Requirements	Potential to Occur in Study Area
Hoary bat *Lasiurus cinereus*	IUNC: LC	Primarily occurs in deciduous and coniferous forests and woodlands, including areas altered by humans, roosting at the edge of clearings. Less likely roosting habitat includes caves, rock ledges, and buildings. Foraging habitat includes various open areas, including spaces over water and along riparian corridors.	Moderate. The Study Area has suitable habitat for this species.
Reptiles			
Western pond turtle *Emys marmorata*	FPT, SSC	Perennial ponds, deep slow-moving streams, marshes and lakes are habitat for this species at 6,000 ft and below in elevation. Eggs are laid in loose soil on land in oak woodlands, mixed coniferous forests, broadleaf forests and grasslands, usually within 400 ft of ponds, lakes, slow streams and marshes with vegetated borders, rocks, or logs. Logs, rocks, cattail mats, and exposed banks are required for basking.	Not Expected. No open water habitat and basking sites present.

[1] This list does not include CNDDB-mapped tidal or marine species for which no suitable habitat occurs on the Project site.

[2]Status Codes: FE – Federal Endangered, FT – Federal Threatened, FPT – Federal Proposed Threatened, FC – Federal Candidate, SE – State Endangered, ST – State Threatened, SCE – State Candidate Endangered, BCC – U.S. Fish and Wildlife Service Bird of Conservation Concern, FP – California Department of Fish and Wildlife Fully Protected, SSC – California Department of Fish and Wildlife Species of Special Concern.

General-9 Conduct Worker Training), impacts to this species would be **less than significant**.

Grasshopper Sparrow (*Ammodramus savannarum*). The Grasshopper sparrow is a State Species of Species Concern, that breeds in foothills and lowlands along the coast and Central Valley. They are small birds, that are named for their buzzy, insect-like song. They are found in California most frequently during their breeding season, between April and July, and less so during the rest of the year. Breeding habitat includes grasslands of

intermediate height mixed with clumped vegetation and interspersed with bare ground. They create their nests on the ground, and typically lay four to five eggs per nesting attempt and may raise multiple broods throughout a single breeding season. Urbanization, vineyard development, and fire suppression are the main threats to the Grasshopper Sparrow in this region (Shuford and Gardali 2008). Grasshopper Sparrows have been documented on the White Hill Preserve by Marin County staff (MCOSP 2015) and may be present during construction activities.

Potential impacts to this species could include disturbance during the nesting season resulting in the abandonment of nests and loss of eggs or chicks. However, with the Project's incorporation of avoidance and minimization measures including Marin County Code 22.20.040 G. Nesting Bird Protection Measures, as well as the measure included in the Project Description stating that construction would take place from outside of the general bird nesting season, and a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), impacts to this species would be **less than significant**.

White-tailed Kite (*Elanus leucurus*). The White-tailed Kite is a State Fully Protected Species that resides in semi-open areas including open woodlands, marshes, and agricultural grasslands. They forage on small mammals, and occasionally on birds, insects, and reptiles, by hovering and parachuting down to the ground for prey. Monogamous pairs breed between February and October, and typically nest in trees and tall bushes well above ground. White-tailed Kites have been documented on the White Hill Preserve by Marin County staff (MCOSP 2015).

Potential impacts to this species could include disturbance during the nesting season resulting in the abandonment of nests and loss of eggs or chicks. However, with the Project's incorporation of avoidance and minimization measures including Marin County Code 22.20.040 G. Nesting Bird Protection Measures, as well as the measure included in the Project Description stating that construction would take place from outside of the general bird nesting season, and a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), impacts to this species would be **less than significant**.

Northern Spotted Owl (*Strix occidentalis* ssp. *caurina*). The Northern Spotted Owl (NSO) is listed as Threatened under the California Endangered Species Act and the Federal Endangered Species Act. High-quality habitat for this species is generally mature forests with a multi-layered canopy; however, coastal populations can be found in younger forests as they regenerate quicker. This species does not build its own nests, rather it seeks out naturally occurring nest sites such as broken-top trees, tree cavities, mistletoe brooms, debris accumulations, or nests built by other wildlife. Breeding occurs once every other year, and nesting occurs between March and June. In the southern portion of the owl's range, their diet consists mainly of dusky-footed woodrats (*Neotoma fuscipes*), although other rodent and small mammals are consumed (CDFW, 2024). There is critical habitat for the NSO within the Saddlecut Reroute portion of the proposed trails. The listed

northern spotted owl has persisted and nested successfully in proximity to the [Camp Tamarancho Mountain Bike] Trail System, in a similar manner to those in the absence of mountain biking, for 20 years (WRA 2022).

Impacts to NSO could include noise disturbance during the nesting season resulting in abandonment of nests, eggs, and chicks. However, with the incorporation of Marin County Code 22.20.040 H. Northern Spotted Owl, as well as the measures included in the Project Description specifying that construction would take place from outside of the general bird nesting season, prohibiting the use of rodenticides, and leaving the dusky-footed woodrat stick structures intact wherever they are found to the extent feasible (woodrats are a primary local prey resource for NSO), as well as a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), impacts to this species would be **less than significant**.

California giant salamander (Dicamptodon ensatus). California giant salamander is a California State Species of Special Concern that ranges from the Santa Cruz mountains in the south to the southern portion of Mendocino County in the north. They are found in humid coastal forests, including redwood, Douglas fir, and other riparian habitats, generally in perennial or almost perennial high-gradient rocky streams. Adults can be found under leaf litter or debris near these streams, and larvae or neotenic adults can be found in slower moving pools of the streams. None of the streams crossed by the proposed trails are perennial or have ponding water, thus suitable breeding habitat for this species does not occur within the vicinity of the proposed trails. However, adults are able to move up to 400 meters away from water, so adults of this species may have a low potential to occur under duff, logs, or rocks.

Impacts to this species could include trampling during construction or impacts to potential habitat. However, with the incorporation of the measures included in the Project Description from the *MCSTOPPP Erosion and Sediment Control Plan*, including grading completion by October 15th to avoid excavation during the rainy season, stream crossings being constructed during periods of low or no stream flow and dry weather, and the work area being delineated in sensitive areas to minimize impacts to habitat, pre-construction surveys in any potential habitat (RTMP Table 6.3 BMP Special-Status Wildlife-2. Preconstruction Surveys), and a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), impacts to this species are expected to be **less than significant**.

Western Bumble Bee (*Bombus occidentalis*). This species is currently a candidate for Endangered Species Status under the California Endangered Species Act. Individuals have been observed 1.3 miles to the northeast of Camp Tamarancho, though these are from 1916 and 1917. This species has some potential to occur within the grasslands adjacent to the Saddlecut and Broken Dam trail re-route alignments, though regional populations have declined drastically since 1998. There are a number of threats facing bumble bees, any of which may be leading to the decline of this species. The major threats to bumble bees include: spread of pests and diseases by the commercial bumble bee

industry, other pests and diseases, habitat destruction or alteration, pesticides, invasive species, natural pest or predator population cycles, and climate change (Xerces 2024).

Potential impacts to this species could include loss of individuals from construction related activities or proliferation of invasive plant species resulting in degradation of potential habitat. However, since the Project is incorporating a number of avoidance and minimization measures, including pre-construction surveys in any potential habitat (RTMP Table 6.3 BMP Special-Status Wildlife-2. Preconstruction Surveys), a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), measures to avoid impacts to special-status plant species during construction (RTMP Table 6.4 BMP Special-Status Plants-2 Avoidance and Protection of Special-Status Plant Species near Road and Trail Management Projects), as well as measures to clean all equipment prior to use to limit the spread of invasive plants, impacts to this species are expected to be **less than significant.**

Special Status Bats [Hoary Bat (*Lasiurus cinereus*), Pallid Bat (*Antrozous pallidus*), Townsend's Big-eared Bat (*Corynorhinus townsendii*)]. None of these bat species are federally or state listed; however, both the Pallid Bat and Townsend's Big-eared Bat are State Species of Special Concern. All three of these bats are insectivores and feed by echolocation. Suitable roosting and foraging habitat for bats is present near the proposed trails and within the larger Camp Tamarancho. Bats may roost in the large trees, especially in tree hollows and crevices, found within the Project site. The Project site also supports suitable foraging habitat and invertebrate food sources are likely to be abundant.

Bats could be impacted by damage to potential roosting or nesting trees, or may be present near the proposed trail construction and thus could be disturbed by the noise and light resulting from construction activities. However, with the incorporation of avoidance and minimization measures including numerous tree protection measures outlined in the Project Description (flagging alignment to avoid heritage and protected trees, pruning to ANSI standards, root pruning, BMPs to prevent the spread of Sudden Oak Death), as well as additional tree protection measures contained in the Marin County Native Tree Preservation and Protection Ordinance (Chapter 22.75 of the Marin County Municipal Code), pre-construction surveys in any potential habitat (RTMP Table 6.3 BMP Special-Status Wildlife-2. Preconstruction Surveys), a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), and construction activities being limited to during daylight hours (thus limiting interference with the foraging ability of bats), impacts to these species are expected to be **less than significant**.

Migratory Birds

In addition to the special-status birds listed above, several migratory birds, which are protected under the Migratory Bird Treaty Act (MBTA), have potential to occur within the immediate vicinity of the proposed trails. These include Allen's Hummingbird (*Selasphorus sasin*), Bald Eagle (*Haliaeetus leucocephalus*), Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*), Black Swift (*Cypseloides niger*), Black-chinned

Sparrow (*Spizella atrogularis*), Bullock's Oriole (*Icterus bullokcii*), California Gull (*Larus californicus*), California Spotted Owl (*Strix occidentalis occidentalis*), California Thrasher (*Toxostoma redivivum*), Common Yellowthroat (*Geothylpis trichas sinuosa*), Golden Eagle (*Aquila chrysaetos*), Lawrence's Goldfinch (*Carduelis lawrencei*), Long-eared Owl (*Asio otis*), Northern Harrier (*Cicus hudsonius*), Nuttall's Woodpecker (*Dryobates nuttalli*), Oak Titmouse (*Baeolophus inornatus*), Olive-sided Flycatcher (*Contopus cooperi*), Santa Barbara Song Sparrow (*Melospiza melodia graminea*), Tricolored Blackbird (*Agelaius tricolor*), Western Grebe (*Achmophorus occidentalis*), Western Gull (*Larus occidentalis*), Western Screech Owl (*Megascops kennicottii cradonensis*), Willet (*Tringa semipalamata*), and Wrentit (*Chamaea fasciata*).

Potential impacts to nesting birds could include noise disturbance from construction or loss of nests resulting from construction activities (ex. tree pruning), resulting in the abandonment of nests and loss of eggs or chicks. However, with the Project's incorporation of avoidance and minimization measures including Marin County Code 22.20.040 G. Nesting Bird Protection Measures, as well as the measure included in the Project Description stating that construction would take place from outside of the general bird nesting season, and a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), impacts to nesting birds are expected to be **less than significant**.

Critical Habitat

As shown in **Figure BIO-3** below, there is critical habitat for the NSO within the proposed trail alignment areas. The proposed construction activities, however, do not include extensive removal of trees and therefore would pose a **less-than-significant** impact to NSO habitat. Additionally, the dusky-footed woodrat (a prey species of the NSO) stick structure near the Lower Caballo Rojo trail would be avoided by the Project.

In addition, there is critical habitat for Coho Salmon and Steelhead within five miles of the proposed trail work. However, none of the proposed trails would be within the vicinity of a stream capable of supporting these fish. Therefore, the Project would not significantly affect any critical habitat, and **no impact** would be expected to fish critical habitat.

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

Sensitive natural communities, such as native grasslands and oak woodlands, are present on the site and could be impacted by construction activities resulting in vegetation removal, soil disturbance, proliferation of invasive non-native species, or spread of Sudden Oak Death. However, the incorporation of multiple avoidance and minimization measures, including conducting a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training), measures to avoid impacts to special-status plant species (and their immediate habitats) during construction (RTMP Table 6.4 BMP Special- Status Plants-2 Avoidance

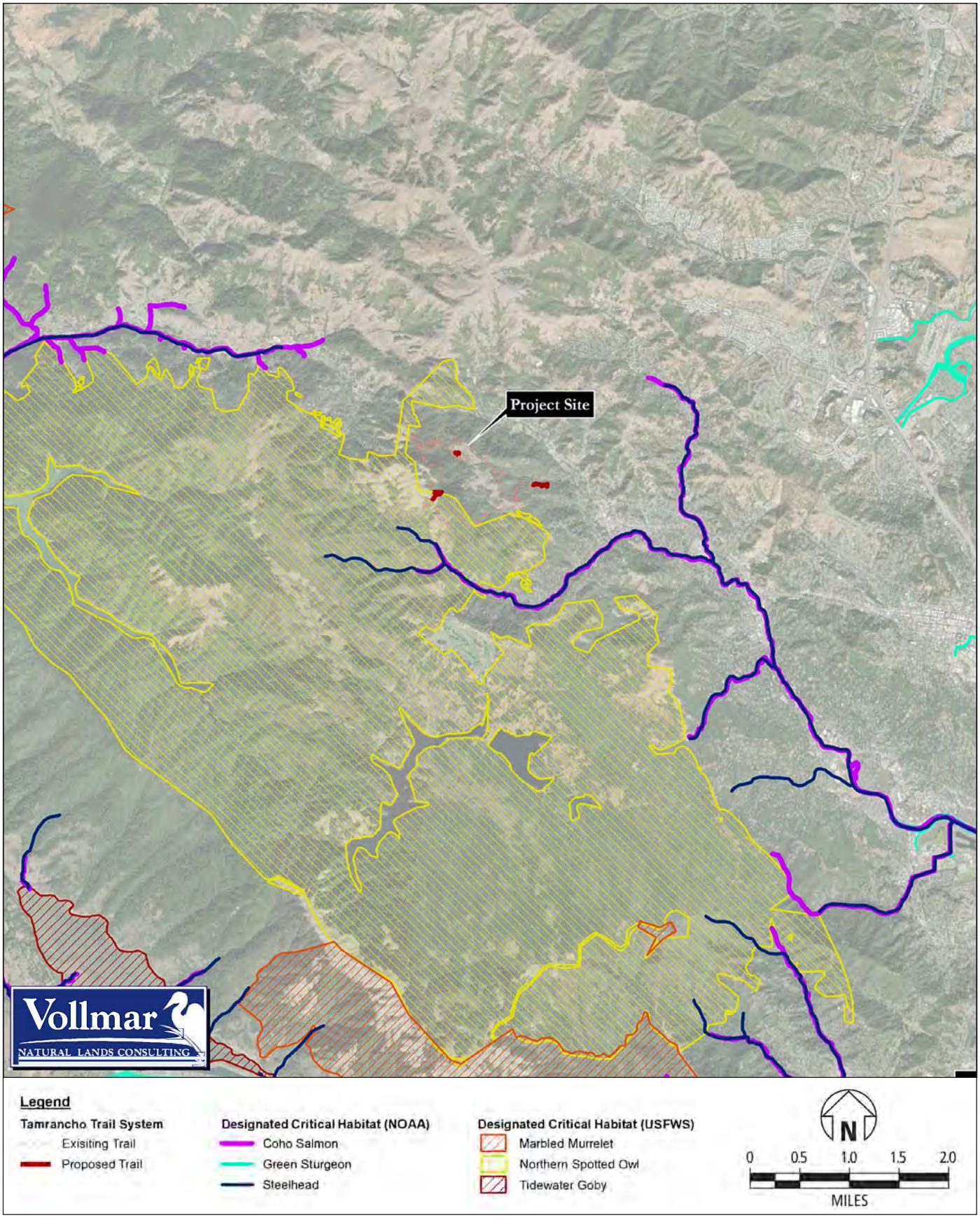

Figure Bio-3
Critical Habitat Map

Source: Vollmar Natural Lands Consulting

and Protection of Special-Status Plant Species near Road and Trail Management Projects), measures to clean all equipment prior to use to limit the spread of invasive plants, as well as precautionary measures to limit the spread of Sudden Oak Death Syndrome (including cleaning and sanitizing gear, mulching California bay trees in place, and restricting the movement of soil and leaf litter), the impacts to riparian habitats and other sensitive natural communities would be **less than significant**.

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?

The Project includes the crossing of intermittent stream systems, which have potential State jurisdiction. Trail construction could have the potential to impact these drainages by soil disturbance resulting in erosion or spills from construction related fluids (diesel, gasoline etc.), and therefore reducing water quality. However, the Project incorporates a number of avoidance and minimization measures from the MCSTOPPP Erosion and Sediment Control Plan, based on the California Stormwater BMP Handbook for Construction, including construction of trails to use grade reversals to minimize concentrations of surface runoff, avoid excavation during the rainy season, stream crossing conducted during periods of low or no stream flow and dry weather, staging, maintenance, and storage or construction equipment away from the Project site, clear delineation of the work area, full bench cuts to better resist surface erosion, compaction of trail surfaces and switchbacks, as well as conducting a worker-training program (RTMP Table 6.1 BMP General-9 Conduct Worker Training) and thus impacts to jurisdictional waters would be **less than significant**.

The proposed boardwalk and bridge features also could result in shading, thus creating a microhabitat change within the waterways. However, the amount of shading created by these features is minimal considering the remaining extent of unshaded area (see **Table BIO-3**) and impacts to habitats from this shading would be **less than significant**.

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?

The Project includes the construction and updates to a narrow trail system. This system is designed to fit into the natural landscape and be relatively low impact (using natural materials and no increase in long-term vehicle traffic). Therefore, the Project would have **no impact** on the movement of native resident or migratory fish or wildlife, migratory wildlife corridors, or wildlife nursery sites.

Table BIO-3. Lower Caballo Rojo Stream Shading

Feature	**Upslope Stream** width x depth	**Downslope Stream** width x depth	**Proposed Structure Dimensions (approximate)**	**Shading of Potentially Jurisdictional Features**
Stream 2	12 x 8 inches	12 x 8 inches	4-foot wide by 16-foot-long boardwalk	12 inches x 4 feet = 4.0 square feet of shading
Stream 3a	12 x12 inches	20 x 12 inches	4-foot-wide by 16-foot-long boardwalk	18 inches x 4 feet = 6.0 square feet of shading
Stream 3b	12 x 12 inches	24 x 12 inches	4-foot wide by 16-foot-long boardwalk	22 inches x 4 feet = 7.3 square feet of shading
Stream 4	24 x 18 inches	30 x 24 inches	4-foot wide by 20-foot-long bridge	30 inches x 4 feet = 10.0 square feet of shading
Stream 5	Avoided	Avoided	None	None
TOTAL				**27.3 square feet**

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As detailed in the discussion above, the Project would conform with County Code requirements and County's Standard Conditions, as well as applicable measures from the MCOSD Road and Trail Management Plan. No trees are proposed for removal, so the project would not have the potential to conflict with the County's Native Tree Preservation and Protection Ordinance. Thus, this Project would not conflict, and thus have **no impact**, with local polices or ordinances protecting biological resources.

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?

The Project area is not covered by a Habitat Conservation Plan, Natural Community Conservation Plan, or other habitat conservation plan, and therefore, **no impact** is expected.

5. Cultural Resources

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	X	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	X	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	X	☐

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Alta Archaeological Consulting (ALTA) prepared an Archaeological Survey Report for the proposed Project (ALTA, 2024). ALTA's study incorporated the results of another survey prepared by Tom Origer for the Saddlecut Trail to Road trail segment of the Project in 2021. The ALTA study was designed to identify any cultural resources within the Project Area. An archaeological pedestrian survey was conducted on October 15, 2024 by ALTA Archaeologist Andrea Levinson. The survey entailed a cultural resources inventory of the Project Area, approximately 6,416 linear feet. Ground surface visibility was generally poor due to dense grasses, leaf litter, brush, and overgrown vegetation. Exposed mineral soils were inspected for evidence of cultural materials. One historic-era aqua glass bottle, 24-245-ISO-1, was identified as a result of archaeological field survey. The survey concluded that the Project would not have the potential to adversely affect any historic resources, and the impact would be **less than significant**.
[20, 21]

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

On October 8, 2024, ALTA archaeologist Heather Warner conducted a records search (File Number 24-0463) at the Northwest Information Center (NWIC) housed by Sonoma State University. The records search included a review of all study reports and resources on file within a quarter-mile radius of the Project Area. Sources consulted include archaeological site and survey base maps, survey reports, site records, and historic General Land Office (GLO) maps. Review of archaeological site and survey maps revealed that six cultural resource studies have been previously performed within a

quarter-mile radius of the Project Area. Approximately 20 percent of the quarter-mile records search radius has been previously surveyed.

ALTA staff archaeologist Andrea Levinson conducted a field survey of the Project Area on October 15, 2024. Project design drawings, Project maps, and aerial imagery were used to correctly identify the Project Area. Ground surface visibility was poor, about 10 percent, throughout the Broken Dam trail survey area due to overgrown vegetation. The survey area of the proposed Caballo Rojo trail had better surface visibility, about 45 percent. The majority of the Project Area was surveyed, totaling approximately 6,300 linear feet (Figure 6). Approximately 150 feet of the Broken Dam reroute section could not be surveyed due to steep slopes. The Project Area was surveyed using intensive survey coverage with transects no greater than 10-meter intervals. A shovel was used to turn over the ground at regular 200-meter intervals during pedestrian survey. A total of 10 shovel pits were conducted at regular intervals throughout the Project Area. No archaeological resources were found in the study.

On the basis of this study and a review of past studies for the Project area, ALTA concluded that the Project would not cause a substantial adverse change in the significance of any archaeological resources. In addition, Marin County Code, Section 22.20.040 - Outdoor Construction Activities, requires:

> E. Archaeological, Historical, and Paleontological Resources. In the event that archaeological, historic, or paleontological resources are discovered during any construction, construction activities shall cease, and the Agency shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may occur in compliance with State and Federal law. The disturbance of an Indian midden may require the issuance of an Excavation Permit by the Department of Public Works, in compliance with Chapter 5.32 (Excavating Indian Middens) of the County Code.

Therefore, the Project's potential impact to any such resources to be **less than significant**.
[20, 21]

c) Disturb any human remains, including those interred outside of formal cemeteries?

ALTA judged the potential for encountering any human remains to be minimal and concluded that this impact would be less than significant. In addition, the California Health and Safety Code Section 7050.5 requires:

> If human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, per PRC 5097.98, the Native American

Heritage Commission must be contacted by the Coroner so that a “Most Likely Descendant” can be designated and further recommendations regarding treatment of the remains is provided.

Therefore, the Project’s potential impact to any such resources to be **less than significant**.
[20, 21]

6. Energy

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	X

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

All construction for the Broken Dam Trail and Caballo Rojo Trail Project elements, as well as the Saddlecut trail relocation, would be by hand labor, and would not consume energy resources, other than for volunteers to get to and from the site. A small fossil fuel amount of energy would be used by the small track-mounted excavator and equipment involved in decommissioning the Saddlecut fire road.

The Project would provide for recreational uses such as hiking and biking which do not depend on fossil fuels. The number of persons using their vehicles to access the Project area trailheads is too small to have a significant impact on energy sources. Trail construction used on-site materials and locally purchased materials. Ongoing trails maintenance would largely be done using hand tools.

The Project is not expected to increase use of the facilities, but rather is intended to address erosion and safety issues on the existing trail/fire road system. None of this energy uses would be wasteful or unnecessary. Therefore, **no impact** would result.
[1, 2, 3]

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

See Item (a), above. The Project would use minimal energy and would have no potential to conflict with any plans regarding renewable energy or energy efficiency. **No impact** would occur.
[1, 2, 3]

7. Geology and Soils

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	X	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	X	☐
iv) Landslides?	☐	☐	X	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	X	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	X	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	X	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X

f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	X	☐

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The entire Tamarancho facility and the adjacent White Hill Open Space are not in an Alquist-Priolo zone nor otherwise subject to ground rupture from faulting. **No impact** would occur with respect to any of the Project elements. [Kleinfelder 2003]

ii) Strong seismic ground shaking?

The Camp Tamarancho and White Hill Open Space areas are likely to experience strong seismic shaking in the event of a major earthquake in the region. A site-specific geotechnical study prepared for the Caballo Rojo trail identified a peak ground acceleration of 0.34g (one 'g' is the force of gravity), which is strong shaking. This level of acceleration would be similar on the other Project element sites because the geologic conditions and distance from major regional faults are similar. The proposed new facilities would be either directly on the ground (i.e. trails), or are small wooden structures spanning creeks, or small retaining wall structures to keep slopes from the trail. None of these features would be likely to suffer seismic shaking damage and, if any damage were to occur, they would not pose a hazard to human health or safety and would be readily repairable. Therefore, this impact would be **less than significant**.
[27, 28, 29]

iii) Seismic-related ground failure, including liquefaction?

Liquefaction is the transformation of loose water-saturated granular materials (such as sand or silt) from a solid into a liquid state when subjected to earthquake activity. The Project area (including all elements) is not mapped as within a liquefaction zone by the County[11]. Given the steep slopes and shallow soils in the areas where Project facilities would be constructed, liquefaction is not likely to affect any of the proposed trails, boardwalks, or bridges. In addition, liquefaction would not represent a significant impact because no substantial structures are being proposed, and any damage to bridges would be readily repairable. Therefore, this impact would be **less than significant**.

[11] https://gisopendata.marincounty.gov/datasets/marincounty::liquefaction-1/explore?location=37.996007%2C-122.608292%2C16.68

[25]

iv) Landslides?

A geotechnical assessment for both upper and lower Caballo Rojo Trail was conducted by Miller Pacific in 2016 (Miller Pacific 2016b). The assessment concluded that the trail has not resulted in significant geologic or geotechnical issues and that the proposed trail can be constructed using site grading and techniques very similar to the existing trail. Two historic landslides were identified on slopes leading up to the bridge over Stream 4, and the proposed trail was aligned to avoid unstable conditions at the top and toe of these features. The report also recommends a retaining wall to support trail construction at the approach to the intersection with Iron Springs Road, which has been included as part of that Project element.

Kleinfelder, Inc. conducted a geotechnical investigation of the existing bike trails at Camp Tamarancho with respect to erosion, sedimentation, and slope stability (Kleinfelder 2003). Although the Project trails are located in an area with numerous slides, soil creep, and unstable slopes, both the Kleinfelder and Miller Pacific reports concluded that the past trails throughout Camp Tamarancho were built in a professional manner, with knowledge of the terrain and designed in a manner to reduce impacts to a level of insignificance. The proposed new trails (all Project elements) also would be constructed to similar standards avoid landslide hazards, and the minor grading associated with the Project would avoid any un-retained cuts that may trigger landsliding. In addition, while landsliding could potentially damage Project facilities, this would not be a significant impact of the Project unless the Project causes the sliding, which is not likely in this case. Therefore, this impact would be **less than significant**.
[27, 28, 29]

b) Result in substantial soil erosion or the loss of topsoil?

Rutting of the trails due to erosion caused by tire spin could lead to channeling of water on the trails. Based on measurements on the Upper Caballo Rojo Trail in 2016 (a year after construction), the width of disturbance along the Upper Caballo Rojo Trail varies from 3 to 8 feet. The measurements of disturbance account for reemergence of existing vegetation through the thinly distributed soil layer surrounding the work area. Future permanent disturbance along the lower trail is conservatively estimated to be 6 feet wide for the remaining 1,300 feet of the Caballo Rojo trail, which would generate an additional 0.46 acre of disturbance, with smaller areas of disturbance for the shorter trails on the other two Project elements.

The proposed new trails would traverse across different sub-watersheds where waters generally sheet drain across the areas of disturbance. This traverse would disperse impacts broadly so that minor sediment accumulations can be absorbed near the trail without migrating into drainages and larger streams. As vegetation reemerges through the

unconsolidated and thinly spread sidecast soil, the 18-inch- to 30-inch-wide trail remains. By using grade reversals, the trails would prevent concentrated runoff, and much of the runoff would be absorbed by the undisturbed soils that parallel the trails.

The Kleinfelder report studied the original trail system and concluded that the silt-laden runoff from those trails did not have an adverse impact upon the surrounding drainage systems because the trails were appropriately designed in relation to site conditions and the well-vegetated slopes act as a natural filter for the minor amount of silt produced. The proposed trails also would be similarly designed, so erosion and siltation impacts would be minimal.

Erosion of loose materials during construction is unlikely because the work would be conducted during the dry season, and erosion-control would be installed as needed upon completion, as described under the Best Management Practices (BMPs), below. In addition, the decommissioning and restoration of the eroding Saddlecut Fire Road would reduce long-term erosion.

The County also requires both construction-phase and permanent BMPs be included in the Project. These include:

Construction BMPs:

- Construction-phase BMPs include erosion and sediment controls and pollution prevention practices[12]. Erosion control BMPs may include, but are not limited to, scheduling and timing of grading (soil disturbing) activities, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control may include properly sized detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses, and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Pollution prevention practices may include designated washout areas or facilities, control of trash and recycled materials, covering of materials stored on-site, and proper location of and maintenance of temporary sanitary facilities. The combination of BMPs used, and their execution in the field, must be customized to the site using up-to-date standards and practices. The agency will provide references to current guidance manuals and BMP information on request.
- Erosion and sediment control plan requirements.
    - 1. An erosion and sediment control plan (ESCP) shall be required for: (a) Any project subject to a grading permit under Chapter 23.08, Excavating, Grading and Filling. (b) Any project subject to a building permit or other permit issued by the county that the agency determines has the potential for significant

[12] https://mcstoppp.org/wp-content/uploads/2020/09/mcstoppp-erosion-and-sediment-control-plan-applicant-package.pdf

erosion and/or significant non-stormwater discharges of sediment and/or construction site waste.

- 2. The ESCP shall comply with County Code Section 24.04.625 and shall include information required in the most recent version of the MCSTOPPP ESCP applicant package.

Permanent BMPs

- Post-construction disturbed areas would be either compacted (trails) or revegetated naturally to minimize sediment transport.

Based on the above, it is anticipated that off-site erosion and sedimentation would be minimal, and this impact would be **less than significant**.
[1, 2, 3 29, 30]

c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

See discussion in Item (a). iv, above. The Project would not be subject to or create any substantial new landslide hazards. Therefore, this impact would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

It is possible that expansive soils exist in areas of the proposed new trail alignments. However, those soils would not adversely affect the trails, and the proposed bridge and boardwalk footings would be designed and installed to account for potential expansive soils issues. Therefore, this impact would be **less than significant**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No septic tanks or systems are proposed as part of any of the proposed Project element. **No impacts** would occur for any of the Project elements.
[1, 2, 3]

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project excavation for all of the Project trails would be very limited, done by hand and a small track-mounted excavator, and would be shallow (cut depths typically 1-3 feet). A small amount of grading and decompaction would be done along the 320 feet of the Saddlecut Fire Road proposed for decommissioning. Therefore, the likelihood of any of the Project elements affecting any paleontological resources is small, and this impact would be **less than significant**.
[1, 2, 3]

8. Greenhouse Gas Emissions

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	X	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	X	☐

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The California Emissions Estimator Model (CalEEMod) was used to quantify greenhouse gas (GHG) emissions associated with Project construction activities. The estimated total construction GHG emissions from the excavator use would be about 0.1 metric tons of "carbon dioxide-equivalents" (CO_2e). Worker commute (i.e., up to 10 workers daily average) over the 6 to 8 week of Project construction period would generate an additional 1.6 metric tons of CO_2e. After the Project work is complete, the Project would not generate any net new GHG emissions either directly (since there would not be any new stationary GHG sources installed by the Project) or indirectly (since motor vehicle use by bicyclists/hikers would not substantially increase). Thus, the Project GHG emissions would be **less than significant**.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

GHGs are atmospheric gases that capture and retain a portion of the heat radiated from the earth after it has been heated by the sun. The primary GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone, and water vapor. While GHGs are natural components of the atmosphere, CO_2, CH_4, and N_2O are also emitted in substantial quantities from human activities and their accumulation in the atmosphere over the past 200 years has substantially increased their concentrations. This accumulation of GHGs has been definitively identified as the driving force behind global climate change.

Human emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with organic decay processes in agriculture, landfills, etc.

The global warming potential of GHGs are typically reported in comparison to that of CO_2, the most common and influential GHG, in units of CO_2e.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, required the California Air Resources Board (CARB) to lower State GHG emissions to 1990 levels by 2020, a 25 percent reduction statewide with mandatory caps for significant GHG emission sources. AB 32 directed CARB to develop discrete early actions to reduce GHG while preparing the Climate Change Scoping Plan in order to identify how best to reach the 2020 goal. Statewide strategies to reduce GHG emissions to attain the 2020 goal include the Low Carbon Fuel Standard (LCFS), the California Appliance Energy Efficiency regulations, the California Renewable Energy Portfolio standard, changes in the motor vehicle corporate average fuel economy (CAFE) standards, and other early action measures that would ensure the state is on target to achieve the GHG emissions reduction goals of AB 32.

The Marin County Unincorporated Area Climate Action Plan 2030 specifies additional actions beyond those required by AB 32 that the County will take to further reduce emissions. The Plan builds on the 2015 Updated CAP, which set a goal to reduce emissions 30 percent below 1990 levels by 2020, doubling County's original 2006 GHG Reduction Plan goal to reduce emissions 15 percent below 1990 levels by 2020. The current Plan is intended to implement the County's goals to (1) reduce emissions 60 percent below 2005 levels by 2030 (equivalent to 53 percent below 1990 levels) and (2) drawdown GHG emissions to below zero by 2045.

The *2017 Clean Air Plan: Spare the Air, Cool the Climate* (Plan) provides a regional strategy to improve Bay Area air quality, meet public health goals and reduce GHG emissions. Through Plan implementation, the Bay Area Air Quality Management District's (BAAQMD's) goal is to reduce GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

The BAAQMD's *CEQA Air Quality Guidelines* does not specify quantitative CEQA significance thresholds for GHG emissions comparable to those for conventional air pollutants. However, quantification and disclosure of project construction and operational GHG emissions in CEQA documents is recommended along with assurance of project compliance with the following:

- The Project will not result in any wasteful, inefficient, or unnecessary energy use.
- The Project will achieve a reduction in Project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan.

The Project would emit minimal GHG emissions and conform to these recommendations and the impact would therefore be **less than significant**.
[32]

9. Hazards and Hazardous Materials

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	X	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	X	☐

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

None of the Project elements would use or transport any hazardous materials either in construction or operation. **No impact** would occur on any of the Project elements. [1, 2, 3]

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As described above, none of the Project elements would use or transport any hazardous materials either in construction or operation. No health hazards have been identified in conjunction with any of the proposed Project elements, and the elements would not be expected to result in the creation of any health hazards. The Kleinfleder report noted no areas where the trails cross exposed serpentine rock that may contain asbestos. If serpentine rocks were crossed, minimal disturbance of this rock may occur because of the minimal grading proposed. Therefore, all of the Project elements would result in **less-than-significant** impacts with respect to any health hazard or potential health hazard. [29]

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

There are no schools within one-quarter mile of the Project site. In addition, as described above, none of the Project elements would use or transport any hazardous materials either in construction or operation. Therefore, **no impact** would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The three Project elements would be constructed in undeveloped forested and grassland areas that have been historically mostly undeveloped (other than the trails and crossings). In addition, a review of the California Department of Toxic Substance Control's EnviroStor database showed no listed hazardous materials sites within several miles of any of the sites[13]. Therefore, **no impact** would occur for any of the Project elements.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The Tamarancho and White Hill Open Space areas are not in the Airport Referral Boundaries contained in the Gnoss Field Airport Land Use Plan[14]. Gnoss Field, located in Novato, is over 15 miles from the Project site. The San Rafael Airport also is located over 6 miles from the Project area. **No impact** would occur.

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[13] https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=1000+Iron+springs+road+fairfax, accessed September 13, 2024

[14] Marin County Airport Land Use Commission, Airport Land Use Plan, Marin County Airport, Gnoss Field, June 10, 1991

[34]

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Neither the nature nor scope of the Project would result in interference with the County's emergency response plan or the emergency evacuation plan. The entire Tamarancho site, as well as the Saddlecut Fire Road site, are served by a recently constructed cell phone tower. The proposed decommissioning of a portion of the Saddlecut Fire Road has been reviewed by the Marin County Fire Department, which determined that the roadway decommissioning would not impede fire-fighting access to the site[15]. Fire trucks could access that site from other nearby fire roads and could travel off-road for the short distance of the decommissioned road. Therefore, all of the Project elements would result in a **less-than-significant** impact relative to emergency response plans.

[15] Email from Randy Engler, Battalion Chief B-1513, Marin County Fire Department, to Michael Dybeck, MCBSA, May 12, 2020

10. Hydrology and Water Quality

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality?	☐	☐	X	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	X	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	X	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	X	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	X	☐
iv) impede or redirect flood flows?	☐	☐	☐	X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	X	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	X

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Each of the Project elements would involve small amounts of grading that may generate sediment in local streams if the trails and road and trail decommissioning work is properly constructed and maintained. All proposed new trails have been sited to avoid ephemeral streams and erosional features to the greatest extent feasible. Free-span boardwalks and a bridge would be constructed over the ephemeral streams that intersect the trail routes would avoid all in-stream construction. All of these structures would be constructed with hand tools and direct impacts to streams would be prevented by installation of temporary foot bridges and fencing on either side of each stream feature prior to construction. By using grade reversals, the trails would prevent concentrated runoff post-construction, and most runoff would be absorbed by the undisturbed soils that parallel the trails. In addition, the trails would traverse across sub-watersheds, which would limit impacts to any single sub-watershed, and minor sediment accumulations can be absorbed near the trail without migrating into drainages and larger streams.

The Saddlecut Fire Road decommissioning/restoration would include small runoff catchments and drainage features to assure that no concentrated runoff that could result in substantial erosion/sedimentation would occur.

The new trails would not substantially change drainage patterns, absorption rates, or the amount of surface runoff because of the small surface area of the trails. In addition, the vegetative cover on downslope sides of the trails facilitates infiltration of runoff, and the trail maintenance program would further reduce any effect on runoff and drainage patterns. No significant, new impermeable surfaces were created by the existing trails, as described in the 2003 Kleinfelder report, which addressed this issue. The proposed Saddlecut Fire Road decommissioning and restoration would increase groundwater infiltration compared with existing conditions because the decommissioning area's soils would be de-compacted.

Please see discussion in Item 7(b), above, for further discussion of this potential impact.

Based on the above discussion, this impact would be **less-than-significant**.
[1, 2, 3, 29]

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed new trail alignments would involve compaction of less than an acre of soils dispersed across several hundred acres of watershed. The only new impervious surfaces to be constructed would be bridge footings, boardwalks and retaining structures, which would involve minimal new ground coverage. As described in Item (a), above, most runoff would be re-absorbed into the soils downslope and adjacent to the new trails. In addition, de-compaction of the Saddlecut Fire Road segment proposed for decommissioning would

further increase infiltration. Therefore, any impacts to groundwater would **be less than significant**.
[1, 2, 3, 29]

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

See discussion in Item (a), above. This impact would be **less than significant**.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

See discussion of Item (b), above. None of the Project elements would measurably affect the quantity of runoff from their respective sites. This impact would be **less than significant**.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

See discussion in Items (a) and (b) above. The Project elements would not substantially increase runoff or add substantial quantities of pollutants to runoff from the area. This impact would be **less than significant**.

iv) Impede or redirect flood flows?

All stream channels crossed by the proposed new trails would either be bridged or crossed by boardwalks that would span over the channels with adequate clearance for any high stormwater flows. No filling of any channels with rock or other materials is proposed. Therefore, the Project elements would not impede or redirect any flood flows, and **no impact** would occur.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

None of the Project elements' facilities would be located within a 100-year floodplain as mapped by FEMA on their Flood Insurance Rate Maps[16]. The Project site is characterized by steep slopes and narrow drainage channels that may have high runoff in in the ephemeral channels during periods of heavy rainfall. The exposure of people and or property to flood hazards, however, is negligible since no habitable structures are proposed as part of any of the Project elements.

[16] https://experience.arcgis.com/experience/7818c52a0dd44fa7843f8631d8193b0f/

The Project elements would be located on the slopes of Mt. Tamalpais, well above any sea-level-rise, tsunami, or seiche runup areas[17]. Overall, the Project elements would not result in exposure of people or property to water related hazards because the Project would only result in negligible changes in runoff and existing elevations are well above flood-hazard areas. The exposure of people and or property to flood hazards, however, is negligible since no habitable structures are proposed as part of Project.

Overall, the Project elements would not result in exposure of people or property to water related hazards because they would only result in negligible changes in runoff (both individually and cumulatively), and existing elevations are well above flood areas. This impact would be **less than significant.**
[37]

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As described above in this section, the Project as designed and implemented consistent with the Marin County Grading Ordinance (Marin County Code Section 23-08)[18] would generate minimal new pollutants to runoff and have minimal effects on groundwater. Therefore, it would have not conflict with any water quality control plan or sustainable groundwater management plan, and **no impact** would occur.

[17] https://experience.arcgis.com/experience/7818c52a0dd44fa7843f8631d8193b0f/
[18] https://publicworks.marincounty.gov/grading-permit/

11. Land Use and Planning

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Physically divide an established community (including a low-income or minority community)?	☐	☐	☐	X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	X	☐
c) Result in substantial alteration of the character or functioning of the community, or present planned use of an area?	☐	☐	☐	X
d) Conflict with applicable Countywide Plan designation or zoning standards?	☐	☐	☐	X

a) Physically divide an established community (including a low-income or minority community)?

The Project elements would be minor reroutes and extensions of narrow mountain bike trails in existing open space and across one low-density large single-family residential parcel, the owner of which has given permission for the trail on their property, as well as removal of an eroding 320-foot-long fire road segment. There are no low-income communities in the Project vicinity. Therefore, the Project would have **no impact** with respect to physically dividing a community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Marin Countywide Plan

The 2007 Marin Countywide Plan includes the following applicable environmental protection goals and policies:

GOAL BIO-4

Riparian Conservation. Protect and, where possible, restore the natural structure and function of riparian systems.

Policies

BIO-4.1 Restrict Land Use in Stream Conservation Areas. A Stream Conservation Area (SCA) is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone.

Best management practices (BMPs) shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs. Exceptions to full compliance with all SCA criteria and standards may be allowed only if the following is true:

1. A parcel falls entirely within the SCA; or

2. Development on the parcel entirely outside the SCA either is infeasible or would have greater impacts on water quality, wildlife habitat, other sensitive biological resources, or other environmental constraints than development within the SCA.

SCAs are designated along perennial, intermittent, and ephemeral streams as defined in the Countywide Plan Glossary. Regardless of parcel size, a site assessment is required where incursion into an SCA is proposed or where full compliance with all SCA criteria would not be met. An ephemeral stream is subject to the SCA policies if it: (a) supports riparian vegetation for a length of 100 feet or more, and/or (b) supports special-status species and/or a sensitive natural community type, such as native grasslands, regardless of the extent of riparian vegetation associated with the stream.

For those ephemeral streams that do not meet these criteria, a minimum 20-foot development setback should be required. SCAs consist of the watercourse itself between the tops of the banks and a strip of land extending laterally outward from the top of both banks to the widths defined below. The SCA encompasses any jurisdictional wetland or unvegetated other waters within the stream channel, together with the adjacent uplands, and supersedes setback standards defined for WCAs.

Allowable uses in SCAs in any corridor consist of the following, provided they conform to zoning and all relevant criteria and standards for SCAs:

- Existing permitted or legal nonconforming structures or improvements, their repair, and their retrofit within the existing footprint;
- Projects to improve fish and wildlife habitat;
- Driveway, road and utility crossings, if no other location is feasible;
- Water-monitoring installations;
- Passive recreation that does not significantly disturb native species;

- Necessary water supply and flood control projects that minimize impacts to stream function and to fish and wildlife habitat;
- Agricultural uses that do not result in any of the following:

  a. The removal of woody riparian vegetation;

  b. The installation of fencing within the SCA that prevents wildlife access to the riparian habitat within the SCA;

  c. Animal confinement within the SCA; and

  d. A substantial increase in sedimentation.

BIO-4.2 Comply with SCA Regulations. Implement established setback criteria for protection of SCAs through established discretionary permit review processes and/or through adoption of new ordinances. Environmental review shall be required where incursion into an SCA is proposed and a discretionary permit is required.

In determining whether allowable uses are compatible with SCA regulations, development applications shall not be permitted if a project does any of the following:

- Adversely alters hydraulic capacity;
- Causes a net loss in habitat acreage, value, or function;
- Degrades water quality.

BIO-4.7 Protect Riparian Vegetation. Retain riparian vegetation for stabilization of streambanks and floodplains, moderating water temperatures, trapping and filtering sediments and other water pollutants, providing wildlife habitat, and aesthetic reasons.

BIO-4.8 Reclaim Damaged Portions of SCAs. Restore damaged portions of SCAs to their natural state wherever possible, and reestablish as quickly as possible any herbaceous and woody vegetation that must be removed within an SCA, replicating the structure and species composition of indigenous native riparian vegetation.

BIO-4.13 Provide Appropriate Access in SCAs. Ensure that public access to publicly owned land within SCAs respects the environment, and prohibit access if it will degrade or destroy riparian habitat. Acquire public lands adjacent to streams where possible to make resources more accessible and usable for passive recreation, and to protect and enhance streamside habitat.

BIO-4.14 Reduce Road Impacts in SCAs. Locate new roads and roadfill slopes outside SCAs, except at stream crossings, and consolidate new road crossings wherever possible to minimize disturbance in the SCA. Require spoil from road construction to be deposited outside the SCA, and take special care to stabilize soil surfaces.

BIO-4.15 Reduce Wet Weather Impacts. Ensure that development work adjacent to and potentially affecting SCAs is not done during the wet weather or when water is flowing through streams, except for emergency repairs, and that disturbed soils are stabilized and replanted, and areas where woody vegetation has been removed are replanted with suitable species before the beginning of the rainy season.

Marin County Road and Trail Management Plan (RTMP)

The MCOSD prepared a Road and Trail Management Plan (RTMP), which was adopted on December 16, 2014. The RTMP is a comprehensive framework to manage and enhance the MCOSD's road and trail systems across 34 preserves. Its primary goals are establishing sustainable infrastructure, reducing environmental impacts, improving visitor experiences, and enhancing safety for diverse user groups. It emphasizes environmental conservation, collaborative public engagement, and adaptive management to address ecological sensitivities and recreational demands over a 15-year implementation period. The RTMP contains numerous policies with respect to biological resources, erosion, sedimentation, slope stability, and trail use. Applicable policies are addressed in those respective sections of this Initial Study.

Project Conformance

None of the proposed trails would encounter SCAs as defined by the Marin Countywide Plan, since the ephemeral drainages over which the trail passes do not support riparian vegetation for a length of 100 feet or more and/or does not support special-status species and/or a sensitive natural community. In addition, all of the Project elements have been designed to minimize erosion/sedimentation potential and to avoid impacts to any nearby SCAs.

Grade reversals and conformance to BMPs in the County's Road and Trail Management Plan (RTMP) would limit construction and operational impacts, as described in the Geology, Hydrology/Water Quality, and Biological Resources sections of this IS. The proposed trail reroutes and fire road and trail decommissioning/restorations would be intended to eliminate existing problematic conditions with respect to water quality and ephemeral streams. The proposed boardwalks and bridge would clear span these water features to eliminate direct impacts by cyclists. These structures also would reduce impacts to riparian habitats, where such habitats exist. The portion of the Broken Dam Trail that would be abandoned would be allowed to revegetate naturally.

While the RTMP does not apply to private lands in the County, numerous RTMP policies have been integrated into the Project Description and would be applied, with certain modifications, to all Project elements (see "Best Management Practices/Avoidance and Minimization Measures" subsection). The Saddlecut Road decommissioning would be subject to RTMP policies, as it would be located on the County's White Hill Open Space lands. As described in the Project Description, that Project element would conform with

all applicable RTMP policies, and would restore and avoid existing eroding and sediment-generating road and trail segments. The abandoned fire road would be restored and revegetated with native vegetation. See also discussion in Soils and Geology and Biological Resources. Sections regarding the Project's proposed implementation of RTMP policies, as included in the Project Description and the County's Standard Conditions of Approval.

Therefore, the proposed Project would conform to County goals and policies, and the impact would be **less than significant**.
[3, 22]

c) Result in substantial alteration of the character or functioning of the community, or present planned use of an area?

The proposed trails and road and trail decommissioning would be similar to existing land uses in the Project area, and therefore would not change the character of function of the area. **No impact** would occur.

d) Conflict with applicable Countywide Plan designation or zoning standards?

The Camp Tamarancho and White Hill Open Space parcels are designated Agricultural 1 (AG1). The 100 Iron Springs Road parcel is designated Very Low Density Residential (SF2) in the Marin Countywide Plan Land Use Map. Similarly, the zoning on the Tamarancho and White Hill parcels is Agriculture and Conservation - 60 Acres (A-60), while the 100 Iron Springs Road parcel is zoned Residential Single Family Planned (RSP-0.25).

Agriculture and Conservation land use categories (AGC 1-3) are established for land with resource values for both agricultural production and wetlands and wildlife habitat. These lands may also have physical constraints, such as heavily wooded hillsides that limit their potential for agricultural production, and deserve protection on the basis of their habitat and visual resource values.

The very-low-density residential land use category (Single-Family 1-2 with minimum lot sizes of 5 to 60 acres) is designated for single-family residential development on large properties in rural areas where public services are limited.

Within the RSP zoning district, bridges require Design Review approval. In addition, site grading would adhere to the standards of the Marin County Department of Public Works and be held to a minimum, requiring no export of soils from the site, and used limited cut and fill. All grading would conform to applicable standards contained in Title 24 of the Marin County Code.

Therefore, the Project would not conflict with applicable land use regulations, and **No Impact** would occur.
[22, 23]

12. Mineral Resources

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	X

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The Project site is, and has been for many years, recreational lands, including a Boy Scout camp, the Tamarancho bike trails, and the White Hill Open Space. There are no valuable mineral resources on the sites. In addition, the construction of small trails and boardwalks/bridges would not affect access to any such mineral resources if they were found to occur. **No impact** to mineral resources would occur.
[37]

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

See discussion of Item (a), above. The minor work proposed under each of the Project elements would have no effect on any mineral resources. **No impact** would occur.

13. Noise

Would the project result in:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	X	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	X	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The more powerful the pressure variations, the louder the sound perceived by a listener. The decibel (dB) is the standard measure of loudness relative to the human threshold of perception. Noise is a sound or series of sounds that are intrusive, objectionable or disruptive to daily life. Many factors influence how a sound is perceived and whether it is considered disturbing to a listener; these include the physical characteristics of sound (e.g., loudness, pitch, duration, etc.) and other factors relating to the situation of the listener (e.g., the time of day when it occurs, the acuity of a listener's hearing, the activity of the listener during exposure, etc.). Environmental noise has many documented undesirable effects on human health and welfare, either psychological (e.g., annoyance and speech interference) or physiological (e.g., hearing impairment and sleep disturbance).

Since the Project site is located in an unincorporated area of Marin County, the Marin Countywide Plan (Plan; Built Environment Element, Chapter 3.10 Noise; adopted 2007) and the Marin County Code of Ordinances (Code; Chapter 6.70 – Loud and Unnecessary

Noises) are the primary sources for the applicable noise control policies and exposure standards considered in this Initial Study.

The unit of measurement for table entries is the decibel (dB), the standard measure of a sound's loudness relative to the human threshold of perception. Decibels are said to be A–weighted (dBA) when corrections are made to a sound's frequency components during a measurement to reflect the known, varying sensitivity of the human ear to different frequencies. The Equivalent Sound Level (L_{eq}) is a constant sound level that carries the same sound energy as the actual time–varying sound over the measurement period. Statistical Sound Levels - L_{min}, L_{90}, L_{10} and L_{max} - are the minimum sound level, the sound level exceeded 90 percent of the time, the sound level exceeded 10 percent of the time, and the maximum sound level, respectively. Additionally, noise is commonly described in L_{dn}, which expresses average sound levels over a 24-hour period in dB.

The following noise control policies/standards (especially their aspects identified in the text underlined) from the Marin Countywide Plan and Marin County Code are relevant to assessing the potential for noise impacts from Project implementation:

- **Goal NO-1** Protection from Excessive Noise (Plan)
  "Ensure that new land uses, transportation activities, and construction do not create noise levels that impair human health or quality of life."

- **Policy NO-1.3** Regulate Noise Generating Activities (Plan)
  "Require measures to minimize noise exposure to neighboring properties, open space, and wildlife habitat from construction-related activities, yard maintenance equipment, and other noise sources, such as amplified music."

- **Implementing Program NO-1.a** Enforce Allowable Noise Levels (Plan)
  "Through CEQA and County discretionary review, require new development to comply with allowable noise levels. The Acceptable Noise Levels in Figure 3-41 [of the Marin Countywide Plan – Section 3.10 Noise] shall be used as a guide for determining the appropriate type of new development in relation to its ambient noise environment."
  Note: The following "Levels" (taken from Figure 3-41 of the Marin Countywide Plan) are applicable to the low-density single-family residential units adjacent/near the Project site:
    - Normally Acceptable – Ldn [19] < 60 dBA
    - Conditionally Acceptable – Ldn < 70 dBA
    - Normally/Clearly Unacceptable – Ldn > 70 dBA]

- **Title 6, Chapter 70, Section 030** (Code)

[19] Ldn, is a 24–hour average sound level (Leq) with a 10–decibel penalty added to sound levels occurring at night between 10:00 p.m. and 7:00 a.m.

- Hours for construction activities and other work undertaken in connection with building, plumbing, electrical, and other permits issued by the community development agency shall be limited to the following:
    - Monday through Friday: seven a.m. to six p.m.
    - Saturday: 9 am to 5 pm

iii. Prohibited on Sundays and Holidays (New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.)

- Loud noise-generating construction-related equipment (e.g., backhoes, generators, jackhammers) can be maintained, operated, or serviced at a construction site for permits administered by the community development agency from eight a.m. to five p.m. Monday through Friday only.

The Project site is in rural, south-central Marin County where the predominant land use is recreational open space with low-density residential located along the site access roads. Sir Francis Drake Boulevard, the largest local transportation noise source, passes more than 1,000 feet north at its closest approach to the Project site. The closest local access road (Iron Springs Road) passes adjacent to the site's southeast boundary.

The Project site and vicinity were surveyed on October 2, 2024 by Mr. Geoffry Hornek, the Project noise consultant, to observe influential local noise sources and to measure typical daytime noise levels that existing residents along the site's southeast boundary, where ambient noise levels are highest due to their proximity to the main access roads. The measurement duration was 20 minutes. The noise data and survey observations are summarized in **Table NOI-1**. The average weekday afternoon noise level was measured to be in the low 40s dBA. The noise of traffic on Sir Francis Drake Boulevard was not audible at any time during the measurement period with only one car pass on Iron Springs Road (which produced the 61.8 dBA L_{max} shown in the table). The main influences on local ambient noise levels were activities in the existing residential area adjacent to the road (i.e., motor vehicle movements, human voices, etc.).

TABLE NOI-1: Daytime Noise Measurement Statistics and Survey Observations

Measurement Location	L_{min}	L_{90}	L_{eq}	L_{10}	L_{max}	Observations
Iron Springs Road, north curbside, near 100 Iron Springs Road driveway 10/02/24 Begin 13:31	29.1	33.8	41.0	40.5	61.8	There was only one vehicle pass on Iron Springs Road (which produced the L_{max}). The most influential local noise sources were in the residential area along Bothin Road to the north. Sir Francis Drake Boulevard passes 1,000 feet or more to the north; its traffic was not audible during the measurement.

Potentially disturbing noise can occur temporarily during construction if equipment activity is high and/or sensitive receptors are close. Noise disturbance can be permanent after construction if a project introduces new, substantial noise sources to the site or in its vicinity.

During Project construction, noise levels in areas adjacent to Saddlecut Fire Road as well as other trail construction using the small track-based excavator, would be substantially elevated by excavator use during the 1-2 weeks of that activity. There are no existing residential or other noise-sensitive receptors within 1,000 feet of the work sites. At all other Project construction sites, work on trails/roads would be done with hand tools that would have no substantial effect on local noise levels.

Existing use of the Project site trails by bicyclists/hikers produce noise from bicycle/foot travel over unpaved surface, bicyclist/hiker voices, etc. This impact would continue at essentially the same levels after Project implementation. Such noise intrusions are intermittent (occurring only when individual or groups for bicyclists/hikers pass close to sensitive receptors) but could be heard by residents living along Iron Springs and Bothin Roads.

Existing weekday afternoon noise levels along Iron Springs Road were measured in the low 40s dBA during the site survey. This is likely the maximum ambient noise level for the entire Project site because the measurement site is closest to the strongest local traffic noise sources. But it is substantially below the County daily average noise standard for low-density, single-family residential uses (i.e., 60 dBA L_{dn}). Daily average noise levels at other locations on the Project site would likely be even lower because of their greater distances from local noise sources. Although single-event noise levels produced by the human voices and bicycle pass-bys of existing and post-Project facility users would occasionally exceed 60 dBA at existing sensitive receptors close enough to the trails, their cumulative effects would not threaten exceedance of the County 60 dBA daily average standard.

No additional motor vehicle traffic would be generated by the Project. Thus, the Project would not increase traffic noise alongside streets in Fairfax or Woodacre. Trail maintenance would continue to be carried out largely with hand tools.

Thus, the Project would have **less-than-significant** temporary or permanent noise impacts.

b) Generation of excessive groundborne vibration or groundborne noise levels?

There are no policies or standards in the Marin Countywide Plan for avoiding/reducing structural damage or annoyance from vibration impacts. However, it is most common for government agencies to rely on assessment methodologies, impact standards, and vibration-reduction strategies developed by the Federal Transit Administration (FTA). According to the FTA, limiting vibration levels to 94 vibration decibels (VdB, a measure of vibration intensity similar to the dB for noise) or less would avoid structural damage to wood and masonry buildings (which are typical of most residential structures), while limiting vibration levels to 80 VdB or less at residential locations would avoid significant annoyance to the occupants.

The most vibration-intensive piece of construction equipment is a pile driver, but no pile driving will be required for the Project. Other types of construction equipment are far less vibration-intensive. Next in intensity are heavily loaded trucks or large tracked earth-moving equipment, which could pose a damage or annoyance threat if they regularly and often come within 25 feet of a vibration-sensitive receptor during construction. These equipment types will also not be used for Project construction. Most of the trail/road work areas where excavator use is expected are 1,000 feet or more away from the closest residences. An excavator would be used for approximately a week to install the retaining wall next to Iron Springs Road, which is approximately 150 feet from the nearest residence. Thus, the potential for vibration annoyance/damage from Project construction is **less than significant.**
[22]

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed Project facilities are not within an Airport Land Use Plan or within 2 miles of an existing airport (both are over 6 and 15 miles from the San Rafael Airport and Gnoss Field, respectively). **No impact** would occur. [34]

14. Population and Housing

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?	☐	☐	☐	X
d) Displace existing housing, especially affordable housing?	☐	☐	☐	X
e) Result in any physical changes which can be traced through a chain of cause and effect to social or economic impacts?	☐	☐	☐	X

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

None of the proposed Project elements would have any impact on population in the Fairfax area or in Marin County because no additional residential dwelling units are proposed, nor would the project substantially induce any economic growth. The extension and relocation of recreational bike trails would not induce any sort of development or economic growth. The new biking/hiking trails are not expected to increase the number of visitors to Camp Tamarancho or White Hill Open Space, as they are essentially replacements for existing roads and trails. There is one camp ranger living at Camp Tamarancho in a permanent dwelling and the applicant proposes no increase in persons living on-site. Therefore, **no impact** would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No housing would be displaced or otherwise affected by any of the projects. Therefore, **no impact** would occur.

c) Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?

See response to Item (a), above. The Project would not have the potential to induce any population or economic growth or otherwise affect population or population projections. **No impact** would occur with respect to population.

d) Displace existing housing, especially affordable housing?

No housing would be displaced by any of the Project elements, which are comprised of bike trail reroutes, trail extensions, and restoration of an eroding fire road segment on undeveloped lands. Therefore, **no impact** would occur.

e) Result in any physical changes which can be traced through a chain of cause and effect to social or economic impacts?

The improvements associated with the proposed Project, either individually or cumulatively, would not induce growth in the Fairfax area nor in Marin County. The new biking/hiking trails are not expected to increase the number of visitors to Camp Tamarancho or White Hill Open Space, as they are essentially replacements for existing roads and trails. Therefore, **no impact** would occur.

15. Public Services

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	X	☐
ii) Police protection?	☐	☐	☐	X
iii) Schools?	☐	☐	☐	X
iv) Parks?	☐	☐	☐	X
v) Other public facilities including roads?	☐	☐	☐	X

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

i) Fire protection?

The Marin County Fire Department provides fire protection for Camp Tamarancho and White Hill Open Space. The Marin County Fire Department station nearest to Camp Tamarancho and the portion of the White Hill Open Space affected by that Project element is located in Woodacre. There is a mutual aid agreement between Marin County and the Ross Valley Fire Departments so that fire and emergency medical response would likely come from the Ross Valley Fire Department Station 21, located in Fairfax. The Caballo Rojo Trail would reduce potential conflicts between cars and bicycles on Iron Springs Road, reducing the potential need for emergency medical services.

The Ross Valley Fire Department has indicated that they would like the individual trails to be clearly marked so that emergency medical responses can be made in

a timely manner. The new and replacement trail segments would include signage marking the trails at all trail junctions.

The proposed decommissioning of a portion of the Saddlecut Fire Road has been reviewed by the Marin County Fire Department, which determined that the roadway decommissioning would not impede fire-fighting access to the site[20]. Fire trucks could access the site from other nearby fire roads and could travel off-road for the short distance of the decommissioned road.

Therefore, the impacts to fire services would be **less than significant**.
[35]

ii) Police protection?

Police protection for Camp Tamarancho is provided by the Marin County Sheriff's Department. The new trail segments would not increase the number of facility users and are not expected to generate a significant increase in calls for police assistance or services and would not generate the need for additional officers or police equipment. Therefore, the Project would have **no impact** on police protection services.

iii) Schools?

The proposed Project would be located in the Fairfax Unified School District. However, they would not generate any new population, including students, and would not affect public or private schools in the surrounding community. Therefore, the Project would have **no impact** on schools.

iv) Parks?

The Saddlecut Project element would involve restoration of a degraded fire road segment in the White Hill Open Space area adjacent to Camp Tamarancho to native habitat. This work would be done after completion of the rerouted bike trail. Similarly, the Broken Dam Trail improvements would be constructed before decommissioning of the existing trail. Therefore, **no impacts** to park use at either Camp Tamarancho or White Hill Open Space would occur with any of the proposed Project elements.

v) Other public facilities including roads?

The proposed Project elements would not result in a noticeable increase in vehicular traffic to Fairfax and would reduce bicycle traffic on Iron Springs Road. Increase in demand for other public facilities, such as for fire or emergency medical services would be minimal or possibly reduced due to separation of bikes and cars on a portion of Iron Springs Road. Therefore, the Project would not result in an

[20] Email from Randy Engler, Battalion Chief B-1513, Marin County Fire Department, to Michael Dybeck, MCBSA, May 12, 2020

impact to existing public facilities, including public roadways. **No impact** would occur with any of the proposed Project elements.

16. Recreation

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed Caballo Rojo trail improvements would extend the trail network at Camp Tamarancho. The Saddlecut and Broken Dam Trail segments would replace existing trail/roadway segments used by cyclists. None of these improvements would result in deterioration of the facility and some (i.e. Saddlecut and Broken Dam trail segments) would improve deteriorated trail facilities. **No impacts** would occur.
[1, 2, 3]

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Project includes improvements to existing recreational facilities, the impacts of which are addressed in this Initial Study. No other park or recreational facilities would require expansion because of the Project. **No impacts** would occur.

17. Transportation

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	X
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	X	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	X	☐
d) Result in inadequate emergency access?	☐	☐	X	☐

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Project elements would be cycling trails improvements, which have no potential for conflict with a program, plan, or policy addressing transportation facilities. In addition, the Caballo Rojo trail would improve bicycle safety by separating downhill bike traffic from motor vehicle traffic on Iron Springs Road. Therefore, **no impact** would occur with any of the Project elements.
[1, 2, 3]

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The proposed Project would not result in increased traffic to the Camp Tamarancho and White Hill Open Space recreational facilities, other than minor traffic associated with up to 10 volunteers and material deliveries during the 6- to-8-week construction period, which would occur between August 15th and October 15th. Most of the volunteers would bike to the site, while others would drive and park near the entrance. If all of the volunteers drove to the site, they would create about 20 trips/day, which is far below the 110-trips/day CEQA thresholds for a detailed VMT analysis for either individual Project elements or cumulatively (it is possible that some of the elements would be constructed concurrently). Therefore, this impact would be **less than significant**.
[1, 2, 3]

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Operation of the Caballo Rojo Trail would remove bicycle traffic from a portion of Iron Springs Road. This would reduce a potential existing traffic hazard. The proposed exit from the Lower Caballo Rojo Train onto Iron Springs Road has been designed such that cyclists would need to slow down before entering the roadway. In addition, sightlines are good at that location, and signage would be installed to warn both cyclists and motorists of potential traffic conflicts at that location. The other two Project elements would be cycling trail relocations that would have no effect roadway hazards. Therefore, potential traffic safety impacts from Project design features would be **less than significant**.

d) Result in inadequate emergency access?

The Project would not result in interference with emergency access. The Tamarancho and White Hill Open Space areas are served by a recently constructed cell phone tower. The proposed decommissioned portion of Saddlecut Fire Road would not impede fire-fighting access to the site, as trucks could access the site from other nearby fire roads and could travel off-road for the short distance of the decommissioned road. Therefore, the Project would result in a **less-than-significant** impact relative to emergency response plans.

18. Tribal Cultural Resources.

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	X
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	X	☐

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the

size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

As described in the Cultural Resources section, there are no historical resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of as defined in Public Resources Code Section 5020.1(k) on the sites that may be affected by the Project. Therefore, the Project would have **no Impact** with respect to these resources.
[20]

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

On August 21, 2024, in accordance with PRC Section 21080.3.1, Marin County sent consultation notification letters regarding this Project to tribal organizations via email. These letters were sent to the Federated Indians of Graton Rancheria (FIGR), the Ione Band of Miwok Indians, and the Coast Miwok Tribal Council of Marin, all of whom had previously requested in writing that the County of Marin consult with their organizations under Assembly Bill (AB) 52. The County received a response from FIGR indicating that the tribe would like to consult on August 23, 2024 and from the Coast Miwok Tribal Council of Marin on September 19, 2024. A response has not yet been received from the Ione Band of Miwok Indians.

County staff met with the Coast Miwok Tribal Council of Marin about the Project on October 1, 2024 as part of tribal outreach; as their organization is not listed by the NAHC as a California Native American Tribe, no formal AB 52 consultation was conducted. County staff separately met with FIGR about the Project on October 8, 2024 for formal Tribal consultation pursuant to AB 52 as FIGR is a NAHC-listed California Native American Tribe. ALTA archaeologist Andrea Levinson contacted the NAHC on October 10, 2024 to request a review of the Sacred Lands file for information on Native American cultural resources in the Project Area. In the NAHC response dated October 15, 2024, Matthew Lin (Cultural Resources Analyst) indicated that a search of the Sacred Lands File returned a negative result. Also, on October 15, 2024, a FIGR representative participated in Alta Archaeological Consulting, Inc.'s archaeological pedestrian survey of the Project area. On November 21, 2024, the County provided FIGR with

a copy of the resulting Draft Archaeological Survey Report prepared by Alta Archaeological Consulting, Inc. for FIGR's review and comment.

No response has been received from FIGR to date regarding the Archaeological Survey Report, but consultation remains ongoing. To date, no specific concerns have been raised by any tribal organization regarding Tribal Cultural Resources for this Project. Therefore, this impact is considered **less than significant**.

19. Utilities and Service Systems

Would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	X
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	X

a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed trail and roadway decommissioning Project elements would not result in the need for new power generating plants or substantial alterations to the existing distribution network. The Project elements would not require any increase in use of electrical power or natural gas. Therefore, the Project would have **no impact** relative to power or natural gas services.

The Project site is served by a newly installed cell phone tower. The Project would have **no impact** relative to communication services.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water supply to Camp Tamarancho is provided by an on-site well. There is no water supply to the affected portion of the White Hill Open Space. The properties are not served by a water district or water distribution facilities. The Project would not result in an increased demand for water on the site. Therefore, the project will have **no impact** to water supplies.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The Project does not propose to provide toilet facilities for trail users; therefore, it would have **no impact** to wastewater treatment facilities.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Project may generate small amounts of solid wastes during construction, particularly associated with the removal of the existing bridge structure on Broken Dam trail. However, this would have **no impact** with respect to Federal, State, or local solid waste standards or infrastructure.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

See response to Item (d), above. The Project would have **no impact** with respect to Federal, State, or local solid waste management or reduction statutes or regulations because they would generate minimal amounts of such wastes during construction.

20. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	X	☐
b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	X	☐
c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	X	☐
d) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	X

a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Project area is classified as a "High" Fire Hazard zone by the State of California[21]. Vegetation along-side many of the Camp Tamarancho bike trails, including a portion of the proposed Lower Caballo Rojo trail extension, has recently been treated for fuels reduction under the Marin Wildfire Prevention Authority's Camp Tamarancho Fuel Reduction and Community Protection Project. However, high fire hazards remain. Although cyclists on the proposed new trails could be subject to fire hazards, these hazards would not increase over existing conditions.

[21]https://gisopendata.marincounty.gov/datasets/b9d3a51966784b7a870933efb7d47ffc/explore?location=37.988088%2C-122.609385%2C15.25

The proposed decommissioning of a portion of the Saddlecut Fire Road has been reviewed by the Marin County Fire department, which determined that the roadway decommissioning would not impede fire-fighting access to the site[22]. Fire trucks could access the site from other nearby fire roads and could travel off-road for the short distance of the decommissioned road. Therefore, this impact would be **less than significant**. [35, 45, 46]

b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The proposed Project would include the installation of new trail segments. However, these would not increase fire risks because the cyclists would just be relocated from other trails and roads, and the project is not anticipated to increase the number of cyclists using the area. Therefore, this impact would be **less than significant**.

c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project would involve construction of segments of narrow, single-track mountain bike trails and boardwalks/bridges to cross drainages. As discussed in the Hydrology section, this would not substantively alter runoff or alter drainage, and trails would be aligned to avoid potentially exacerbating landslide hazards. There are no areas of post-fire instability at the Project site. Therefore, the Project would not have the potential to expose people or structures to these hazards, and the impacts would be **less than significant**. [27, 28, 29]

d) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

See discussions in Items (a)-(c) above. The Project would not increase the exposure of people or structures to significant risk of loss, injury, or death compared with existing conditions. **No impact** would occur.

[22] Email from Randy Engler, Battalion Chief B-1513, Marin County Fire Department, to Michael Dybeck, MCBSA, May 12, 2020

21. MANDATORY FINDINGS OF SIGNIFICANCE. Pursuant to Section 15065 of the State EIR Guidelines, a project shall be found to have a significant effect on the environment if any of the following are true:

	Yes	No	Maybe
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	X	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	X	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	X	☐
d) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	X	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As described in the Biological Resources and Cultural Resources sections above, the proposed Project, incorporating all applicable County policies and standards summarized in these sections, as well as Best Management Practices and avoidance measures described in the Project Description section, would not have the potential to significantly adversely affect either sensitive biological resources or historic or prehistoric resources.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

There are no new projects proposed that could have potentially overlapping (i.e., cumulative) impacts with those of the proposed Project. Impacts of past projects (i.e., previously constructed trails on the Camp Tamarancho property) are described in the Project Description section and treated as the baseline in this document. The proposed Project does not have the potential to result in cumulatively considerable impacts.
[1, 2, 47, 48]

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As described in the Noise, Air Quality, and Hazards and Hazardous Materials sections of this document, the proposed Project would not result in any potentially significant adverse effects to humans.

d) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?

As described in this document, the proposed Project does not have the potential to interfere with any long-term environmental goals. In addition, relocating bike trails away from sensitive resources and eroding areas would reduce potential long-term impacts associated with use of the Project area.

VI. DETERMINATION: (Completed by Marin County Environmental Planning Manager). Pursuant to Sections 15081 and 15070 of the State Guidelines, the forgoing Initial Study evaluation, and the entire administrative record for the project:

[X] I find that the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[ ] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

[ ] I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Rachel Reid, Environmental Planning Manager

February 26, 2025
Date

CAMP TAMARANCHO MOUNTIN BIKE TRAIL SYSTEM IMPROVEMENTS PROJECT

DOCUMENTS INCORPORATED BY REFERENCE

The following is a list of relevant information sources that have been incorporated by reference into the foregoing Initial Study pursuant to Section 15150 of the State CEQA Guidelines. These documents are both a matter of public record and available for public inspection either online or at the Planning Division office of the Marin County Community Development Agency (CDA), Suite 308, 3501 Civic Center Drive, San Rafael. The information incorporated from these documents shall be considered to be set forth fully in the Initial Study.

1. WRA, Caballo Rojo Trail, Design Review Submittal, March 13, 2024.

2. WRA, Camp Tamarancho Mountain Bike Trail System, October 2022.

3. Marin County Parks and Open Space District, Project Description, Saddlecut Fire Road, Road-to-Trail Conversion Project, July 26, 2024.

4. https://gis.marinpublic.com/Lookup/GeneralPlanLookup/

5. Bay Area Air Quality Management District (BAAQMD). *California Environmental Quality Act Air Quality Guidelines*. 2022. https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines

6. BAAQMD. Air Quality Standards and Attainment Status. http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status

7. BAAQMD. Stationary Source Screening Map. https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

8. California Air Resources Board (CARB). Summary: Diesel Particulate Matter Health Impacts. https://ww2.arb.ca.gov/index.php/resources/summary-diesel-particulate-matter-health-impacts

9. California Air Pollution Control Officers Association (CAPCOA). *California Emissions Estimator Model (CalEEMod) User's Guide*. http://www.caleemod.com/

10. BAAQMD. *2017 Clean Air Plan: Spare the Air, Cool the Climate*. 2017. https://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans

11. Jane Valerius, Vegetation, Wetlands and Waters of the U.S. for Camp Tamarancho Bike Trails, 2003

12. Ibis Environmental, Biological Evaluation of the Camp Tamarancho Bicycle Trail Project, 2003

13. LSA Associates, Inc. Biological Site Assessment, Camp Tamarancho, 2004

14. WRA, Camp Tamarancho Trail Maintenance and Mitigation Report, 2015

15. WRA, Tree Assessment for the Caballo Rojo Mountain Bike Trail (Technical Memo) 2016

16. PCI, Caballo Rojo Trail Biological Site Assessment, White Hill Preserve, Saddlecut Project (for MCOSD) 2022

17. WRA, Broken Dam Realignment – Tree Assessment Memo, 2022

18. WRA, Biological Site Assessment, MCBSA Camp Tamarancho Trail System 2022

19. Steven Byrne, A Cultural Resources Inventory of the Camp Tamarancho Hiking/Biking Trail, 2002

20. ALTA Archaeological Consulting, Archaeological Survey Report for the Tamarancho Boy Scout Camp, Fairfax, Marin County, California. November 20, 2024.

21. Tom Origer and Associates, Cultural Resources Study for the Saddlecut Trail Project, White Hill Open Space Preserve, 2021

22. Marin Countywide Plan, CDA - Planning Division (2007)

23. Marin County Development Code, Title 22, CDA - Planning Division

24. Marin County Development Standards, Title 24, Marin County Department of Public Works - Land Use and Water Resources Division

25. https://gisopendata.marincounty.gov/datasets/marincounty::liquefaction-1/explore?location=37.996007%2C-122.608292%2C16.68

26. Alquist –Priolo Special Studies Zone Map (1974)

27. Miller Pacific Engineering Group, Geotechnical Evaluation. Caballo Rojo Trail Construction, 100 Iron Springs Road, Fairfax, California. February 23, 2016.

28. Miller Pacific Engineering Group, Letter from Scott Stephens, Geotechnical Engineer, to Cara Zichelli, Marin County Public Works Department, July 11, 2024.

29. Kleinfender, Inc. Geotechnical Evaluation, Camp Tamarancho Bicycle Trail, Fairfax, CA. November 13, 2003.

30. Marin County Code Chapter 23.18 - Stormwater Runoff Pollution Prevention

31. California Air Resources Board (CARB). *AB 32 Global Warming Solutions Act of 2006*. https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006

32. Marin County. *Marin County Unincorporated Area Climate Action Plan 2030*. 2020. https://www.marincounty.gov/departments/cda/sustainability/climate-action-plan/climate-action-plan-2030

33. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=1000+Iron+springs+road+fairfax , accessed September 13, 2024

34. Marin County Airport Land Use Commission, *Airport Land Use Plan, Marin County Airport, Gnoss Field*, June 10, 1991

35. Email from Randy Engler, Battalion Chief B-1513, Marin County Fire Department, to Michael Dybeck, MCBSA, May 12, 2020

36. https://experience.arcgis.com/experience/7818c52a0dd44fa7843f8631d8193b0f/

37. https://www.marincounty.org/~/media/files/departments/cd/planning/currentplanning/publications/county-wide-plan/background-reports/geology_background_report.pdf

38. Flood Insurance Rate Map Series of Marin County, California, prepared by the Federal Emergency Management Agency

39. California Department of Toxic Substances Control (DTSC), 2024. EnviroStor database. Available online: http://www.envirostor.dtsc.ca.gov/public/

40. Mineral Resources, CDA - Planning Division (1987)

41. Marin County, *Marin Countywide Plan (Noise, Chapter 3.10),* 2007 (Revised 2023). https://www.marincounty.gov/departments/cda/planning/plans-policies-and-regulations/marin-countywide-plan

42. Marin County, Code of Ordinances, (Chapter 6.70 – Loud and Unnecessary Noises), https://library.municode.com/ca/marin_county/codes/code_of_ordinances?nodeId=TIT6PUPESAMO_CH6.70LOUNNO

43. Federal Transit Agency (FTA), *Transit Noise and Vibration Impact Assessment Manual*, 2018. https://www.transit.dot.gov/research-innovation/transit-noise-and-vibration-impact-assessment-manual-report-0123

44. Marin County Sheriff Department, official website, available online at http://www.marinsheriff.org/.

45. https://gisopendata.marincounty.gov/datasets/b9d3a51966784b7a870933efb7d47ffc/explore?location=37.988088%2C-122.609385%2C15.25

46. Marin Wildfire Prevention Authority, Camp Tamarancho Fuel Reduction and Community Protection Project, Cal VTP PSA, August 2023.

47. https://www.marincounty.gov/departments/cda/planning/projects/fairfax-unincorporated

48. https://mcstoppp.org/2020/03/construction-projects/

49. https://mcstoppp.org/