

TIERED INITIAL STUDY

Gary Giacomini Trails Improvements

Prepared by
Marin County Open Space District
June 2016



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Gary Giacomini Open Space Preserve, Marin County, California

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6. General Plan Designation

Open Space

7. Zoning

170-120-31: RSP – 0.05 (Residential Single Family Planned)
170-120-37: RSP – 0.05
170-130-32: RSP – 0.05
169-351-09: RSP – 0.05
169-331-17: RSP – 0.47
169-163-02: RSP – 0.47
169-351-04: RSP – 0.05

RELATIONSHIP TO THE RTMP

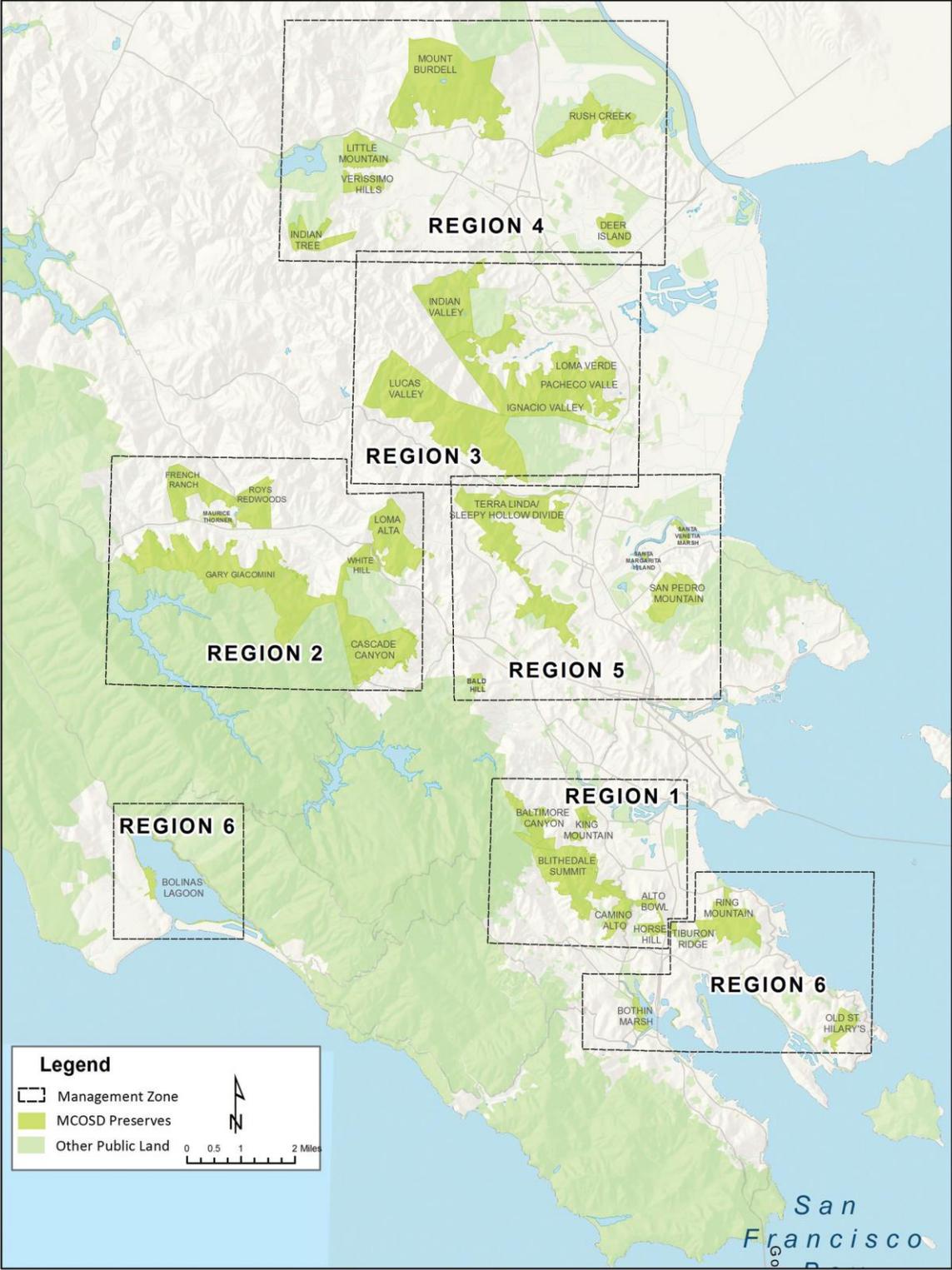
This Initial Study tiers from the Road and Trail Management Plan (RTMP)¹ Recirculated Tiered Program Environmental Impact Report (EIR) (State Clearinghouse Number 2011012080) that the Marin County Open Space District (MCOSD) Board of Directors certified as meeting the requirements of the California Environmental Quality Act (CEQA) on December 16, 2014, (MCOSD, 2014a and 2014b). 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) reduce environmental impact of roads and trails on natural resources; and 3) improve visitor experience and safety.

The RTMP covers six regions (Figure 1) within Marin County, and 34 open space preserves. Region 2, which includes the project site, covers the following open space preserves:

- French Ranch
- Roy's Redwoods
- Maurice Thorner
- Gary Giacomini
- White Hill
- Loma Alta
- Cascade Canyon

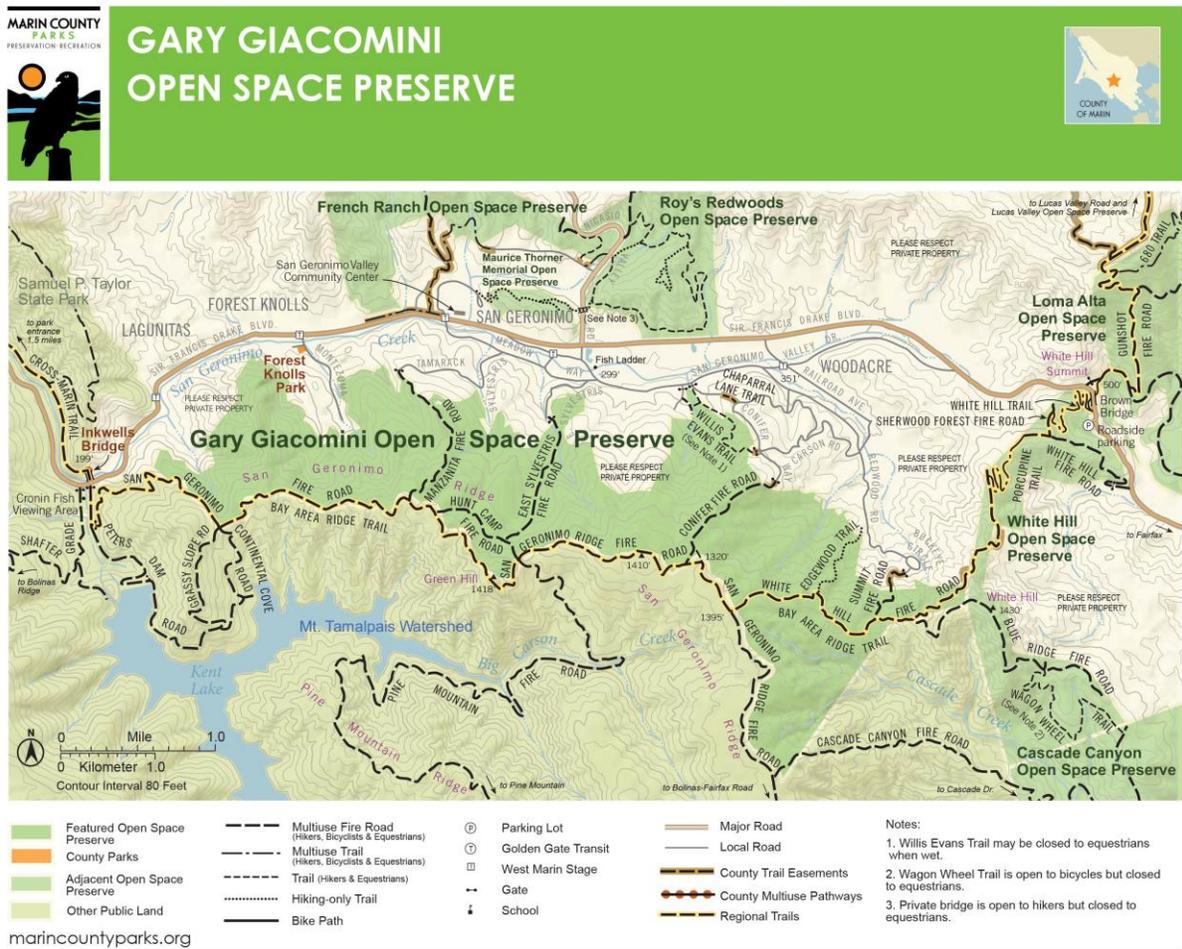
¹ For a copy of the RTMP, go to http://www.marincountyparks.org/~media/files/departments/pk/projects/open-space/rtmp-eir/rtmp_lowres_3615_bookmarks.pdf?la=en. Printed copies are available from Marin County Parks for a small fee.

Figure 1: MCOSD Preserves by Region



The proposed project is to adopt, as part of MCOSD's system of roads and trails, two abandoned historic logging roads and three unsanctioned trails on the northern facing slope of San Geronimo Ridge near the communities of Woodacre, San Geronimo, Forest Knolls and Lagunitas (Figure 2), and approximately 10 miles west of San Rafael, CA. The Gary Giacomini Open Space Preserve is the largest preserve in Region 2 and consists of 1,500 acres. Region 2 contains approximately 69 miles of roads and trails (MCOSD 2014b).

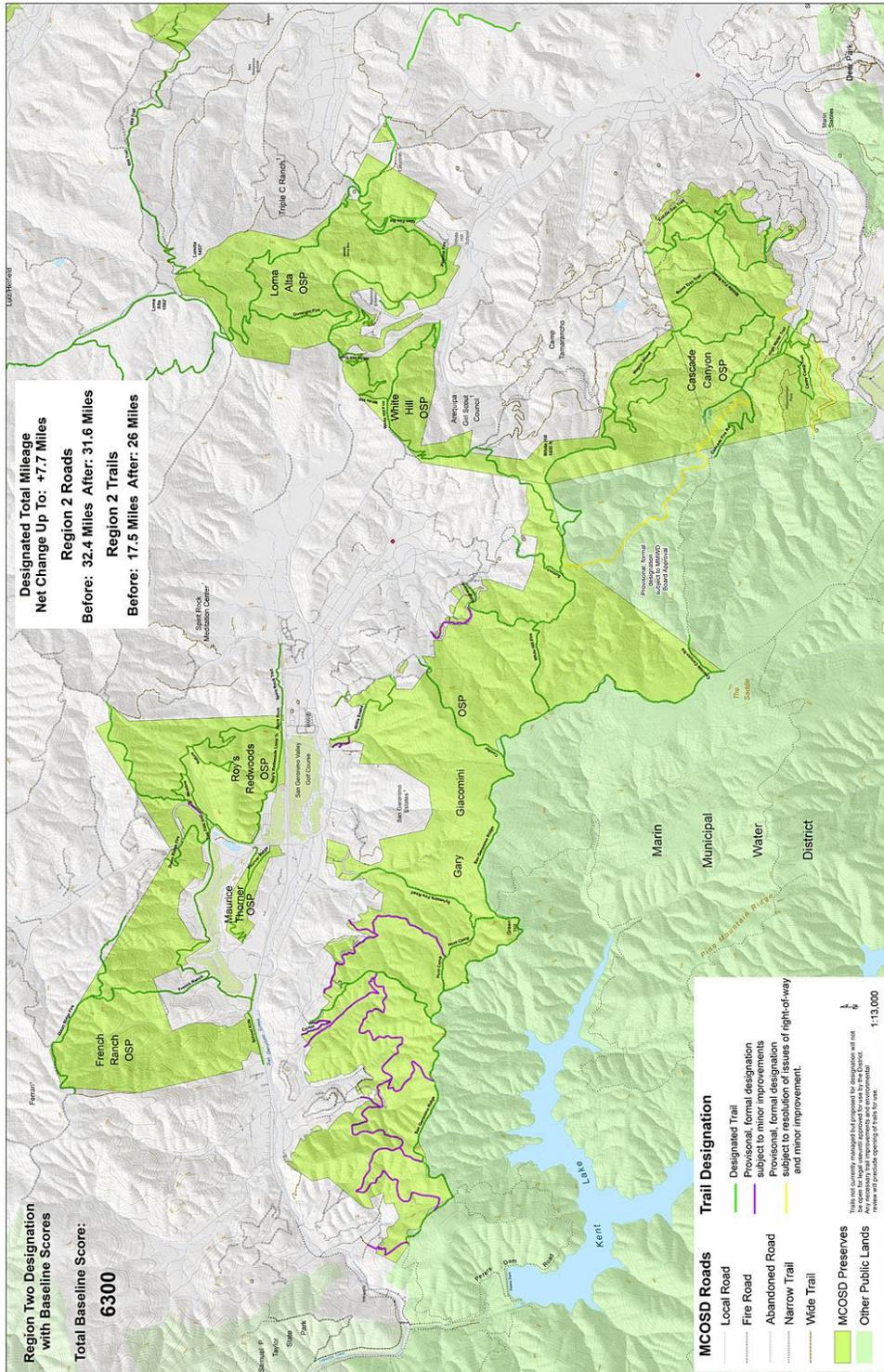
Figure 2: Map of Gary Giacomini Preserve



The MCOSD developed the RTMP over the course of four years based on extensive outreach and public input. After adoption of the plan and consistent with the RTMP's *Policy SW.2: System Roads and Trails*, the MCOSD initiated a process to designate a system of roads and trails in all existing open space preserves. The roads and trails eligible for consideration as part of the system must have existed as of November 2011, which is when the MCOSD completed an extensive existing conditions report for almost all of the existing roads and trails. The designation of a formal road and trail system is proceeding on a regional basis. The road and trail designation for Region 2 occurred in mid-2015. The maps for Region 2 (Figure 3) includes the Giacomini Trails as provisionally part of

the system, because the trails require improvements before the MCOSD can incorporate them into the system.

Figure 3: Region 2 Trail Designations



The RTMP identifies 34 new policies (Appendix A) that govern the MCOSD's road and trail system. These policies will reduce the environmental impact from these roads and trail, and will improve the recreational experience. The proposed project is consistent with or implements the following policies:

- SW.3, Social Trails
- SW.4, Overall Reduction of Road, Trail, and Visitor Impacts
- SW.12, Road and Trail Connectivity
- SW.19 Redundant Roads and Trails
- SW. 22 Protect High Value Vegetation Types
- SW.23, Identify High Value Biological Resources
- SW.24, Minimize Intrusions into Larger Contiguous Habitat and Wildlife Corridors
- SW.31, Floodplain for New and Improved Roads and Trails
- T.1, Loop and Long Distance Trail Connections

In addition to these policies, the RTMP defined several best management practices (BMPs) (Appendix A) that will reduce resource impacts from any road and trail projects. The proposed project incorporates the following BMPs.

- General-1 Limit Work Area Footprints in Sensitive Areas
- General-3 Minimize Potential for Erosion
- General-4 Control-Food Related Trash
- General-5 Modify Construction Methods Relating to Soil Disturbance, Restrict Use of Offsite Soil, Aggregate, or Other Construction Materials
- General-6 Prevent or Reduce Potential for Pollution
- General-8 Control Noise
- General-9 Conduct Worker Training
- General-10 Road and Trail Inspections
- General-11 Management of Sudden Oak Death
- Sensitive Natural Resources-1 Modify Management Practices near Sensitive Natural Resources
- Special-Status Wildlife-1 Literature Reviews
- Special-Status Wildlife-2 Preconstruction Surveys
- Special-Status Wildlife-3 Seasonal Restrictions during Bird Nesting Seasons
- Special-Status Wildlife-8 Worker Awareness Training
- Special-Status Wildlife-9 Construction Monitoring
- Special-Status Wildlife-10 Relocation of Special-Status Species
- Special-Status Wildlife-11 Noise Control
- Special-Status Wildlife-12 Trash Control
- Special-Status Wildlife-13 Road and Trail Inspections
- Special-Status Plants-1 Literature Reviews
- Special-Status Plants-2 Avoidance and Protection of Special-Status Plant Species
- Special-Status Plants-5 Erosion Potential near Special Status Plants
- Special-Status Plants-6 Introduction of Invasive and Nonnative Plants and Plant Material

- Special-Status Plants-7 Revegetation with Native, Geographically Appropriate Plant Species
- Special-Status Plants-8 Worker Awareness Training
- Special-Status Plants-10 Road and Trail Inspections
- Special-Status Plants-12 Ripping and Recontouring Roads
- Invasive Plants-1 Compliance with Integrated Pest Management Ordinance
- Invasive Plants-3 Survey and Control of Invasive Plants in Project Footprint
- Invasive Plants-4 Limited Soil Disturbance
- Invasive Plants—5 Cleaning of Heavy Equipment, Maintenance Tools, and Fire Management Vehicles
- Invasive Plants-6 Reducing Potential for Establishment of Invasive Plants on Disturbed Soil Surfaces
- Invasive Plants-7 Monitor and Control of Invasive Plants in Road and Trail Management Work Areas
- Invasive Plants-9 Road and Trail Inspections
- Invasive Plants-10 Monitor Decommissioned Areas
- Cultural Resources-1 Historical and Archaeological Resources Mapping
- Cultural Resources-2 Consultation with Northwest Information Center
- Cultural Resources-3 Tribal Consultation
- Cultural Resources-6 Construction Discovery Protocol
- Cultural Resources-7 Human Remains
- Water Quality-1 Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas
- Water Quality-2 Temporary Erosion and Sediment Control
- Water Quality-3 Erosion Control Measures
- Water Quality-4 Preventing or Reducing the Potential for Pollution
- Water Quality-5 Road and Trail Inspections
- Water Quality-6 Grading Windows
- Water Quality-8 Proper Disposal of Excess Materials
- Water Quality-9 Sidecasting Construction Material
- Air Quality-1 Implement BAAQMD Measures
- Air Quality-2 Minimize Dust Emissions During Construction
- Air Quality-3 Enhanced Dust Control During Construction
- Air Quality-4 Dust Control during Construction in Sensitive Resource Areas
- Noise-1 County Noise Ordinance Requirements
- Noise-2 Noise Control During Construction within and adjacent to Sensitive Wildlife Populations

Appendix A contains a full description of all the BMPs identified into the RTMP.

CEQA Process

CEQA defines a program EIR as a document that may be prepared on a series of actions characterized as one large project and related geographically or in connection with the development of a plan. In this case, the RTMP is a planning document covering the 34 open space preserves managed by the MCOSD, and therefore, is one large project that with a geographic and a planning

connection. CEQA allows a lead agency to examine subsequent activities in light of the program EIR to determine whether an additional environmental document must be prepared.

1. If the agency determines that the later activity would have effects that were not examined in the program EIR, it will prepare a new negative declaration or EIR
2. If the agency finds that no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.

CEQA also requires the agency to incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program. The advantage of this process is that the lead agency may rely on the program EIR: (1) as a basis for determining whether the subsequent activity may have any significant effects; (2) rely on the program EIR to address regional influences, secondary effects, cumulative, impacts, broad alternatives, and other factors that apply to the program; and (3) focus an EIR on subsequent projects to permit discussions solely of new effects.

Tiering

The CEQA concept of “tiering” refers to the evaluation of general environmental matters in a broad program level EIR, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the discussions in the 2014 RTMP program EIR and concentrates on project specific issues. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the EIR and by incorporating those analyses by reference.

Section 15168(d) of the State CEQA Guidelines provides for simplifying the preparation of environmental documents on individual parts of the program by incorporating by reference analyses and discussions that apply to the program as a whole. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]).

This initial study is tiered from the MCOSED’s RTMP EIR in accordance with Sections 15152 and 15168 of the CEQA Guidelines and Public Resources Code Section 21094. The 2014 RTMP EIR is a program EIR that was prepared pursuant to Section 15168 of the CEQA Guidelines. The 2014 RTMP is a comprehensive science-based plan that guides the maintenance, management, and construction of roads and trails on the MCOSED’s open space preserves. The RTMP EIR analyzes full implementation of uses and physical development proposed under the RTMP. The RTMP EIR does not identify any measures to mitigate the significant adverse program-level and cumulative impacts associated with the plan, because the RTMP includes a detailed policy statements describing the minimum requirements for any road or trail project. Additionally, the RTMP includes a comprehensive list of best management practices (BMPs) that avoids most significant environmental effects from future road and trail projects. The RTMP EIR evaluated the plans environmental effects at a program level and concluded that these policies and BMPs avoid any

significant environmental effects. The proposed project is a result of the RTMP process to designate a system of road and trails.

By tiering from the RTMP EIR, this initial study will rely on the program EIR for the following:

- a discussion of general background and setting information for environmental topic areas;
- overall growth related issues;
- issues that the RTMP EIR evaluated in sufficient detail for which there is no significant new information or change in circumstances that would require further analysis; and
- assessment of cumulative impacts.

This initial study will evaluate the potential environmental impacts of the proposed project with respect to the RTMP EIR to determine what level of additional environmental review, if any, is appropriate. As shown in the analysis below, the MCOSD has determined that the proposed project may have potentially significant effects on the environment that were not previously addressed RTMP EIR, or may have environmental effects that are less-than-significant but have been selected for further analysis and disclosure. This initial study also demonstrates that the MCOSD can mitigate for these environmental effects to a level that is less than significant. Therefore, the MCOSD will prepare a mitigated negative declaration.

This initial study concludes that that the RTMP EIR addresses most of the potentially significant project impacts with policies and BMPs contained in the RTMP. Therefore, those policies and BMPs that are related to and may reduce the impacts of this project will be identified in this initial study. Since the MCOSD is already carrying out these policies and BMPs as part of the implementation of the RTMP, it will not readopt these measures in this initial study, rather the MCOSD is incorporating them as part of the project. The impact analysis incorporates these measures by reference and relies on them to determine the significance of any project impact. Nothing in this initial study in any way alters the obligations of the MCOSD to implement the RTMP policies and BMPs.

PROJECT DESCRIPTION

The MCOSD is proposing to adopt, as part of its system of roads and trails, a portion of the existing network of historic abandoned logging roads and unsanctioned trails on the northern facing slope of San Geronimo Ridge near the communities of Woodacre, San Geronimo, Forest Knolls and Lagunitas.

The project requires modifications to the existing roads and unsanctioned trails to reduce water quality impacts to nearby watercourses, improve the trails to reduce conflicts between users, and increase public safety. These historic logging roads existed when the MCOSD purchased this property and have since continued to get used by users of the preserve. People who live in vicinity of the preserve appear to be the primary users of these trails. This is consistent with the findings of the Marin County Parks Visitor Study Report (2016) which found three quarters of people surveyed were residents of Marin County and just over half lived within one mile of the park/preserve/path where surveyed. Over the last five years, bicycle use has gotten more intense throughout the region, and staff has had to decommission some illegally constructed trails and bike jumps.

The proposed project includes the following components:

- Adopt in place and improve 14,071 feet of existing unsanctioned trails and historic abandoned roads
- Decommission 4,400 feet of existing unsanctioned trails and roads

This network of unsanctioned trails and abandoned roads totals 2.5 miles in length and providing connectors between Candelerero Avenue, Resaca, Manzanita Fire Road and San Geronimo Ridge Fire Road. The MCOSD is proposing to adopt these trails into its designated system of roads and trails with improvements to maintain trail sustainability.

The MCOSD contracted with Gold Ridge Resource Conservation District (RCD) to assess the current network of abandoned roads and unsanctioned trails and make recommendations to accept, upgrade, or decommission each trail within the area. The evaluation revealed that the existing trail network is composed of approximately 6,760 feet of legacy logging haul roads, 2,287 feet of legacy streamside access road, 2,882 feet of legacy skid trails and 2,142 feet of constructed single track (RCD 2016). The single-track trails are a mix of well-worn trails that have received little or no human improvements, built trails, and abandoned roadbeds.

The project includes widening and re-grading of portions of the existing trails that the MCOSD will adopt. Additionally, areas of bench trail on the haul and skid roads will be narrowed to improve drainage. These trails will be open to hikers and bikers only, with the exception of the contour trail, which will be equestrians, hikers and bikers. The bench cut will vary in width from two to six feet. The project includes the removal several saplings and limbs throughout the project site. Additionally, 2 – 10” diameter at breast height bay trees on the Sinaloa Trail in Section 4 will be removed as part of the project.

Figure 4 Location Map

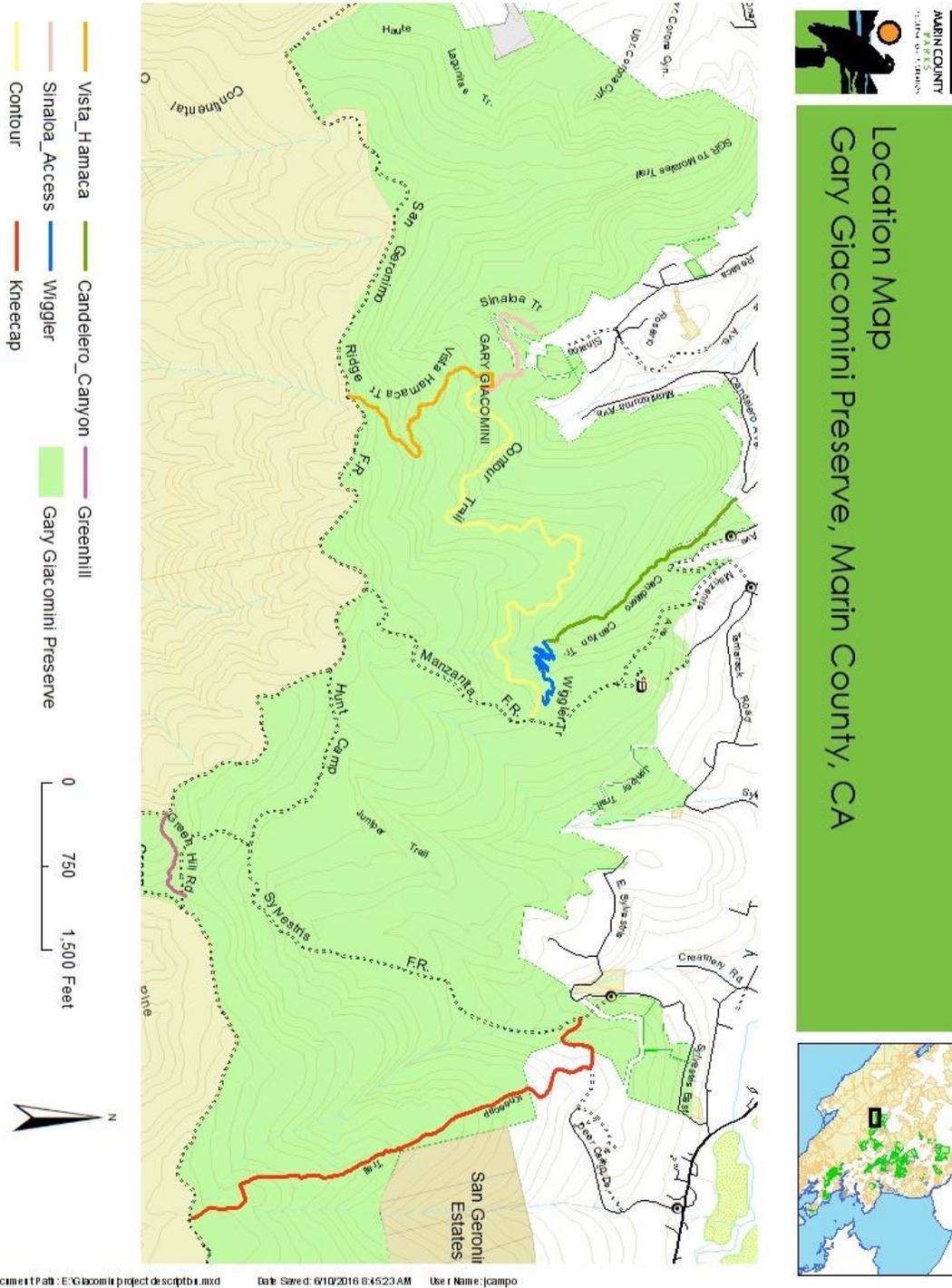
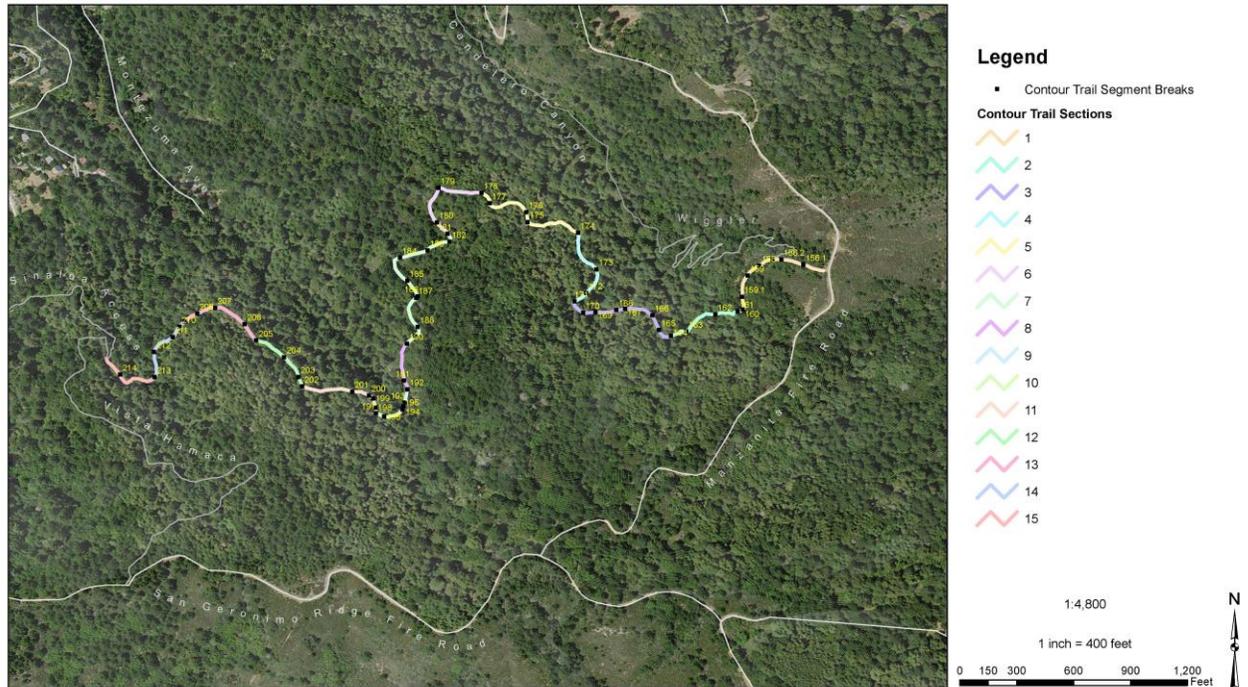


Figure 5: Contour Trail

Map 2

Contour Trail Assessed Sections and Segments



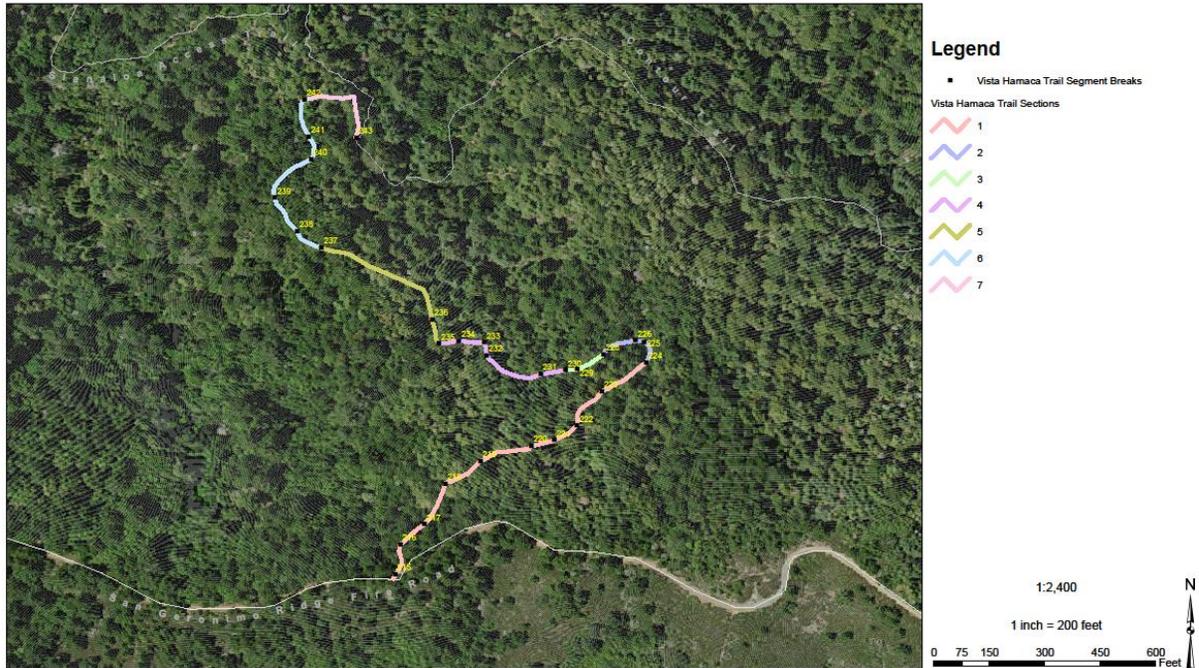
The MCOSD evaluated the Contour Trail from its eastern trailhead at Manzanita Fire Road to its terminus at the intersection with the Vista Hamaca Trail (Figure 5). The trail is approximately 5,966 feet in length and generally follows the contour of San Geronimo Ridge mid slope around the 750-foot elevation line with an overall gradient of <math><10\%</math>. However, segment six has a running slope of ranging between 12%-20%. The trail is actually an old logging haul road, and as such is as much as 20 feet wide in places (RCD 2016). In 2010, the MCOSD Road and Trail crews implemented recommendations made by PWA, including the installation of rolling dips, and armored fill stream crossing structures. All stream crossing sites encountered along the trail had been upgraded and were functioning properly. No necessary stream crossing work was noted. The specific project elements of the Contour Trail include the following:

- Establish a new ramped trail with a gradient <math><10\%</math> throughout at the fill-slope failure of Section 11
- Minor removal of out slope berm in areas where drainage could be improved
- Narrow trail in areas where the excessively wide logging road still is creating drainage problems

Figure 6: Vista Hamaca Trail

Map 3

Vista Hamaca Trail Assessed Sections and Segments



The MCOSD evaluated the Vista Hamaca Trail from its southern trailhead on the San Geronimo Ridge Fire Road to its terminus at the intersection with the Contour Trail (Figure 6). The trail is approximately 2,587 feet in length, and extends downslope, traversing twice across the upper catchment of Montezuma Creek before following a ridge nose to the intersection with the Contour Trail and Sinaloa Access Trail. While the extreme upper portion of the trail is of somewhat low gradient, the majority of the cut occupied by the trail appears to be an old skid trail with gradients exceeding 30% in places. Unlike the Contour Trail, drainage upgrades have not been installed on Vista Hamaca.

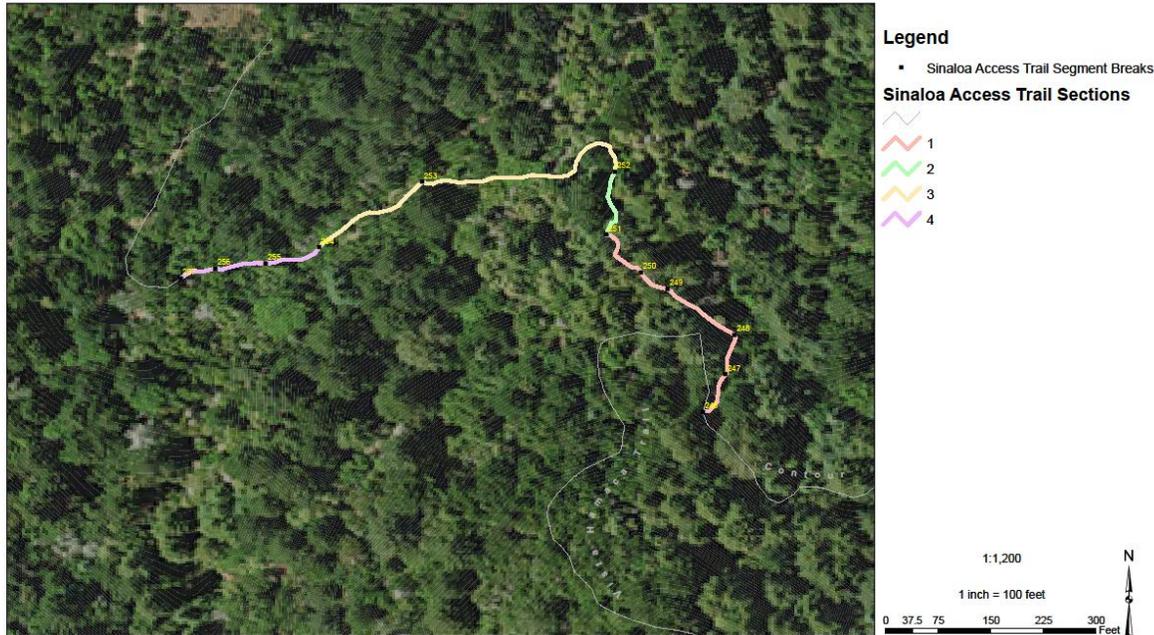
The specific project elements of the Vista Hamaca Trail include the following:

- Remove the berm along the outboard trail edge in areas of Section 1 and pull fills to narrow the bench. Material should be compacted against the cutbank and used to establish an outsloped trail with grade reversing dips at regular intervals (100 feet)
- Alternatively, areas of the bench will be left at its current width and grade-reversing dips will be established that tie into the cutbank and breach the berm
- Address the drainage issues in Section 4, which has led to the fill-slope failure. Pull fills upslope, obliterate ditch, compact material along the cutbank and construct a narrower, outsloped and dipped trail along this segment
- Remove a section of a downed redwood tree blocking the trail in Section 4
- Construct a wet crossing in the axis of the drainage in Section 4 to drain the trail side ditch and swale flows which carry sheet flow from the adjacent hillside

Figure 7: Sinaloa Trail Segments

Sinaloa Access Trail Assessed Sections and Segments

Map 4



The MCOSD evaluated the Sinaloa Access Trail from the trailhead at the intersection with the Vista Hamaca and Contour Trails to the Sinaloa Creek crossing where upgrade work has been completed (Figure 7). The trail is approximately 1,490 feet in length and varies in gradient from 10-35%. The upper 377 feet of trail is constructed single track that was established as reroute around the top of the landslide that removed the entire road prism on the abandoned section of the Contour bench above the left bank of Montezuma Creek. The trail then occupies a steep skid road on the ridge nose that extends downslope from hairpin turn on Vista Hamaca with a trail gradient range from 25-35%. The trail finally reoccupies the haul road bed leading from Montezuma to Sinaloa.

The specific project elements of the Sinaloa Trail include the following:

- Maintain the constructed single track portion of Sinaloa Access Trail by hand
- Replace brow logs with wall structures to gain width and retain fill
- Consider completing road to trail conversion in Sections 3 and 4 by pulling outboard fills, compacting spoils against the cutbank, narrowing the tread, and establishing an outsloped and dipped trail
- Access Trail to Sinaloa Trail near the rolling dip in Section 4

Figure 8: Wiggler Trail

Map 5

Wiggler Trail Assessed Sections and Segments



The MCOSD evaluated the Wiggler Trail from the eastern end of the Contour Trail to the head of Candeler Canyon, where it connects with the Candeler Canyon Trail (Figure 8). The Wiggler Trail is a constructed single track trail that extends downslope and is approximately 1,765 feet long with an average gradient of 8.5%, however, this grade is not constant. Rather, the trail transitions between short steep pitches and lower gradient sections. The average trail width is approximately 2 feet, with some segments as narrow as 1 foot. The Trail contains several switchbacks and climbing turns as it traverses down a steep, forested slope dominated by bay and Douglas fir.

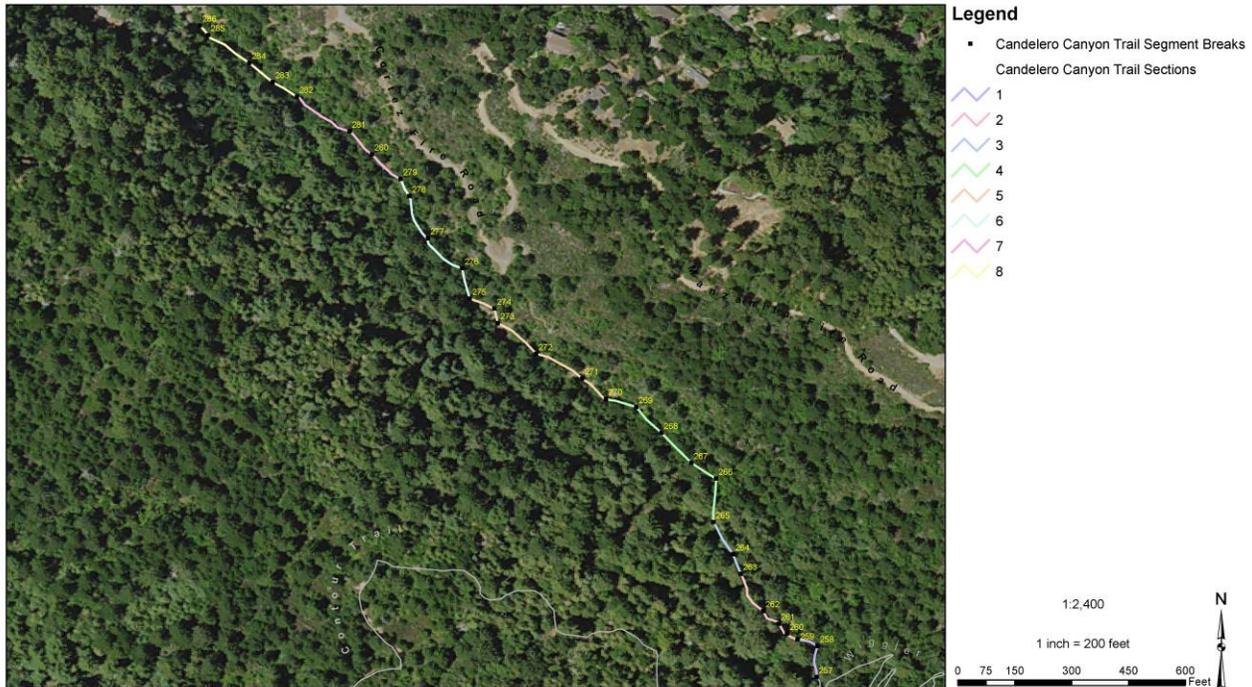
The specific project elements of the Wiggler Trail include the following:

- Install grade reversing dips at regular intervals (50-75 feet) to ensure proper drainage
- Remove slough from inboard trail areas to improve tread width and usability
- At very narrow trail segments with steep side slopes, and at areas where brow logs are utilized to support the trail, consider installing walls.
- Improve switchback approaches (gradients and widths). Wall installation may be necessary at some locations
- Retain single track width and maintain by hand

Figure 9: Candelero Canyon Trail

Map 6

Candelero Canyon Trail Assessed Sections and Segments

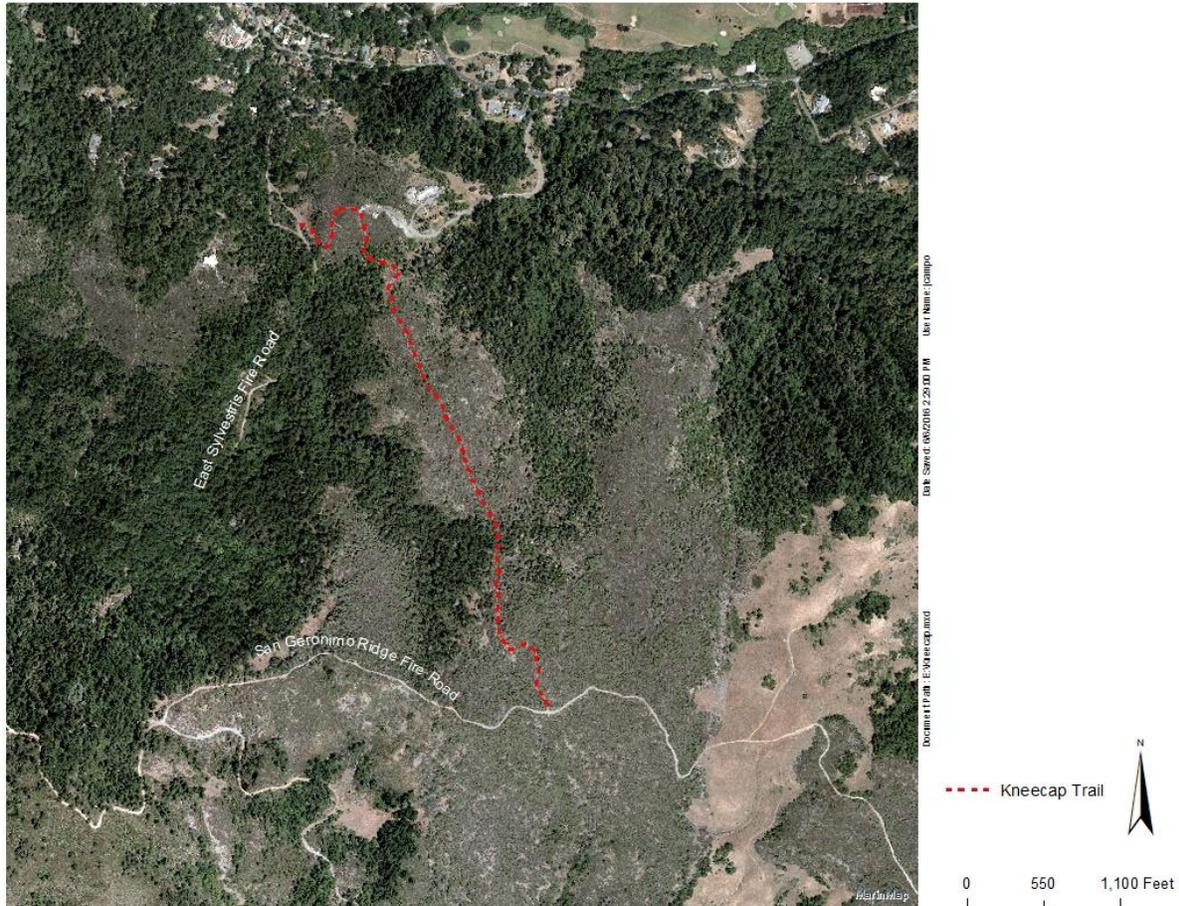


The MCOSD evaluated the Candelero Canyon Trail from the northern end of the Wiggler Trail to where it connects to Candelero Avenue (Figure 9). The Trail is a steep, streamside, inner gorge road that was utilized to extract lumber from Candelero Canyon. The trail is approximately 2,287 feet in length with an average gradient of 14%. However, the road “stairsteps” its way downslope with steep pitches ranging from 20-30%, broken up by lower gradient sections in the 5-10% range. The road bench width has been maintained at around 12 feet over the trail’s entire length, with the exception of a short 75 feet streamside section at the top of the canyon. The District installed drainage improvements on the trail in 2010. These included the construction of armored fill stream crossing structures, the installation of rolling dips, berm removal, and some outsloping

The specific project elements of the Candelero Canyon Trail include the following:

- Install a rolling dip in Section 1
- Remove downed tree from Section 1
- Enhance rolling dip in Section 4
- Establish a rolling dip in Section 5 to drain spring flows
- Remove berms, pull fills and outslope the trail throughout its length to improve drainage, narrow trail widths and reduce maintenance costs

Figure 10: Kneecap Trail

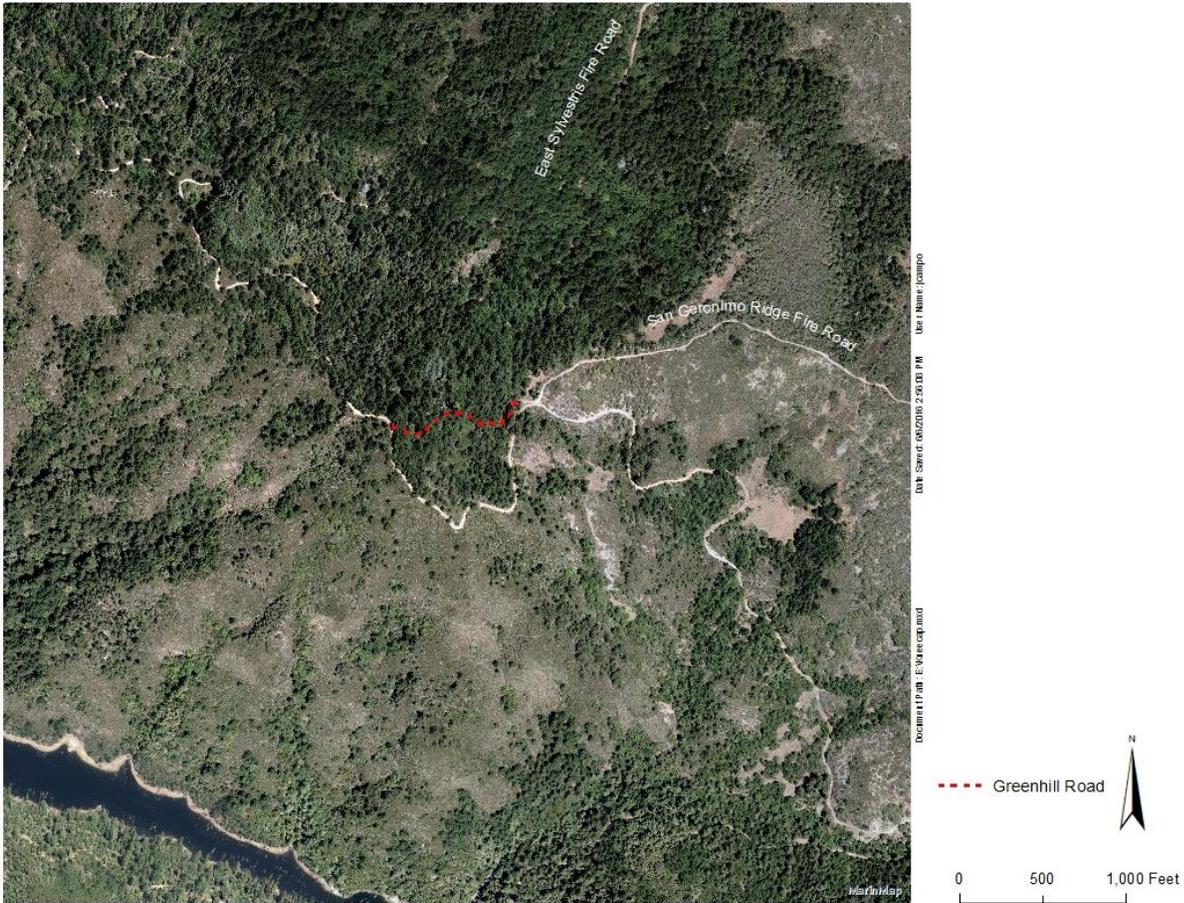


The MCOSD evaluated the Kneecap Trail from its northern trailhead at the East Sylvestris Fire Road to its terminus at the intersection with the San Geronimo Fire Road (Figure 10). The Kneecap Trail is an unsanctioned trail which is approximately 1,542 feet in length. The majority of the trail is located in Legacy Zone (Figure 12) and is approximately 1 to 2 feet in width and well worn. Due to the biological sensitivity of the site the MCOSD will decommission the entire length of trail using only hand tools.

The specific elements of this project include the following:

- Decommission the entire length of the Kneecap Trail
- Decommission of trail will be completed with the use of only hand tools and will include; scarification of trail bed, brushing, boulder placement and split rail fencing with signage

Figure 11: Green Hill Road



The MCOSD evaluated the Green Hill Fire Road from its eastern and western connection with the San Geronimo Fire Road (Figure 11). The Green Hill Fire Road is an abandoned fire road which is approximately 282 feet in length. The entire fire road is located in Legacy Zone (Figure 12) and is deeply degraded. MCOSD will decommission the entire length of fire road with the use of a Sweco to re-grade the slope contour to render the decommissioned road hydrologically invisible

The specific elements of this project include the following:

- Decommission the entire length of the Green Hill Fire Road
- Re-grade and contour abandoned Green Hill Fire Road with Heavy equipment

VEGETATION REMOVAL AND STRUCTURES

The proposed project will adopt the existing trail to avoid any additional environmental impacts. The proposed project may require the removal of understory vegetation, small trees, shrubs, grasses, and other similar vegetation during berm removals and narrowing of the road or trail bed. The project will require the removal of two, 10-inch diameter at breast height, bay trees which are

protected under Marin County Code Section 22.130.030, the but will not require the removal of any other species of protected or heritage trees.

The MCOSD is proposing to use existing roads and trails or other disturbed areas as staging areas (Campo, 2016), as required by BMP General-1, Road and Trail Management Plan. Access to the project site for construction vehicles and equipment would be from the San Geronimo Fire Road, Manzanita Fire Road, Candalero Avenue or Sinaloa Avenue. Construction would occur Monday through Friday, from 7:00 a.m. to 5:00 p.m. Construction would take about 13 weeks. During construction, the MCOSD would limit trail access for safety purposes and would install signs at preserve entrances to warn trail users.

BIOLOGICAL RESOURCES

The project is located within the Gary Giacomini Open Space Preserve, which occupies the north facing slope of the San Geronimo Ridge near the communities of Woodacre, San Geronimo, Forest Knolls and Lagunitas. The preserve abuts residential neighborhoods along its northern margin, and is adjacent to the Mount Tamalpais Watershed to the south (MCOSD 2014). As mapped in the draft Vegetation and Biodiversity Management Plan (VBMP), the project area in this preserve falls into three different management zones (Figure 12), Legacy and Sustainable, Natural Systems, and Natural Landscape Zones (MCOSD 2015). The VBMP describes these zones as:

Legacy Zone

The legacy zone includes lands that support unique or irreplaceable remnants of natural biological diversity, along with other vegetation types with high biological value. The habitats for plants that have been identified as threatened, endangered, or rare in the world, the nation, the state of California, or Marin County are included in this zone, along with wetlands and selected upland vegetation types, including redwood forest, serpentine grasslands, and chaparral. Also included are habitats and vegetation types that are at the boundaries of their geographic distributions and that may be important to detecting, and managing for adaptation to, the effects of climate change.

Native vegetation in this zone remains largely intact and free of invasion by nonnative plants. Because of their rarity and ecological importance, many species and vegetation types within this zone are protected by federal and state laws and regulations, or by other initiatives, such as the Upland Habitat Goals Project. The legacy zone will serve as a sanctuary for natural resources that otherwise could be permanently lost from Marin, California, and the world.

Sustainable Natural Systems

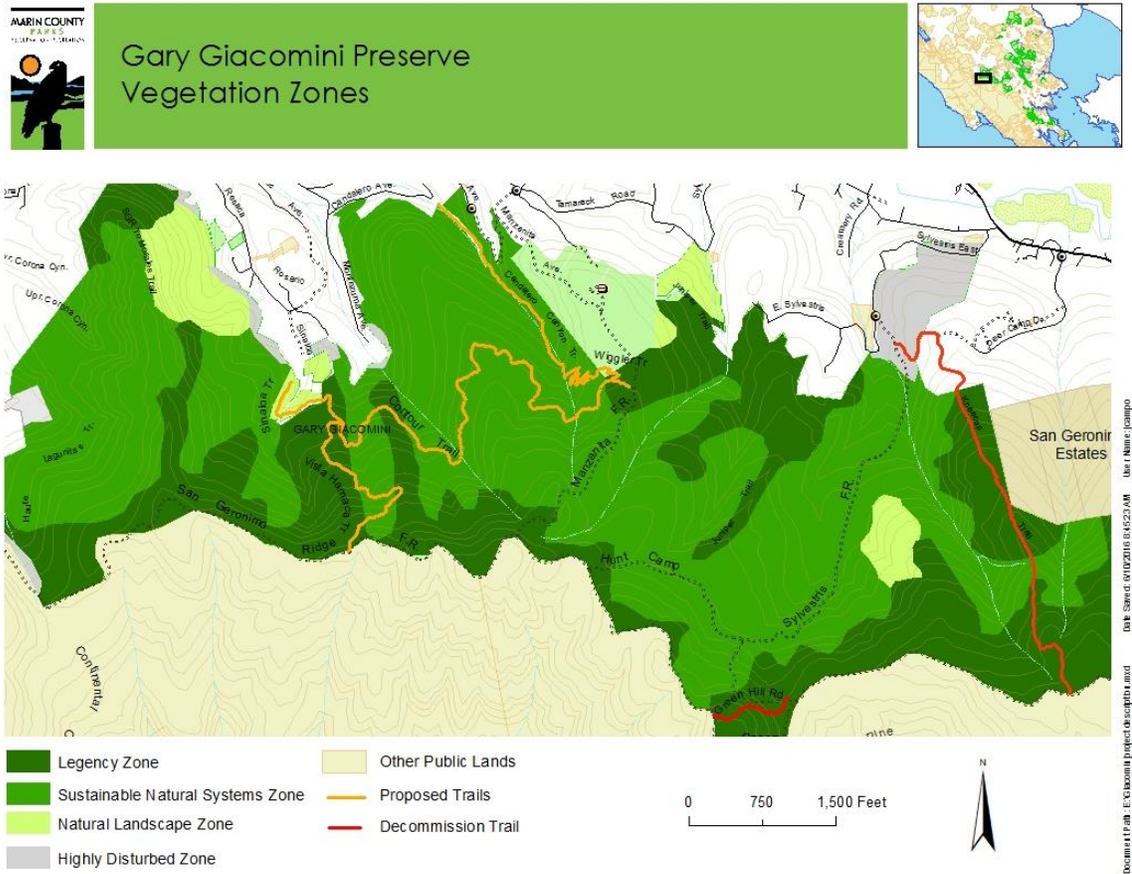
The sustainable natural systems zone includes lands that are valuable for ensuring the ecological resiliency of natural systems and the associated character of Marin County. Lands in this zone, which generally form a natural buffer around lands in the legacy zone, include corridors supporting wildlife movements and potentially the movements of species adapting to climate change, areas of refuge for species living within or migrating through Marin County, and vegetation types

that are not considered as biologically valuable as those included in the legacy zone, but that are still considered “hot spots” in terms of relatively high species diversity. Lands in this zone contain only minimal infrastructure, and the vegetation types are relatively free of invasive species.

Natural Landscape Zone

The natural landscape zone includes lands that support native plants and natural vegetation types that are typical of Marin County landscapes. These common vegetation types, while not legally protected or recognized as rare, provide valuable habitat for a diversity of local native species. They contribute to the beauty of Marin County landscapes and add to the ecologically rich natural communities and scenic vistas that define the MCOSD preserves. Vegetation within the natural landscape zone often provides important buffers between the wildland-urban interface and other zones and contains large tracts of grasslands, common oak and other woodland vegetation types, and coastal scrub. While this zone is more infested with invasive plants than the legacy and sustainable natural systems zones, it still provides valuable connectivity and important habitat for common wildlife and plants.

Figure 12: Vegetation Management Zones, Gary Giacomini Preserve



The Preserve totals 1,500 acres and occupies much of the north-facing slope of San Geronimo Ridge. The proposed project occurs primarily on north facing slopes where the landscape is dominated by redwood and Douglas fir forest, with interspersed bays, tanoaks, live oaks and chinquapin. The preserve supports northern spotted owl, which is a federally listed threatened species, and the U.S. Fish and Wildlife Service (USFWS) has designated the Gary Giacomini Preserve as “critical habitat” for this species.

A complete inventory and assessment of preserve conditions can be found in Appendix B. Appendix B is an excerpt from the Marin County Parks Vegetation and Biodiversity Management Plan (Draft 2015). The inventory includes sensitive vegetation types, special-status plant and wildlife species, and a listing of important invasive plants found in Gary Giacomini Preserve.

GEOLOGIC RESOURCES

Elevations on the Preserve range from 250 feet near the valley floor to 1,418 feet at Green Hill. The area receives approximately 38 inches of precipitation annually (Marin County Fire, Woodacre). According to the Natural Resource Conservation Service the soils within the trail network area are dominated by Dipsea-Barnabe very gravelly loams on slopes ranging from 30 to 75% and a moderate erodibility. The Dipsea soil is characterized as a very gravelly loam to a depth of 48 inches underlain by weathered bedrock of sandstone and shale. The Barnabe soil is characterized as a very gravelly loam to a depth of 20 inches underlain by sandstone or chert bedrock (USDA, 2013). The soil drains well with a high runoff classification and occur on steep to extremely steep slopes with concave downslope shapes and concave to convex cross slope shapes. The project is adjacent to a few ephemeral streams with trail crossings. This project does not include any alteration or work within the stream corridor.

CULTURAL RESOURCES

The Gary Giacomini Open Space Preserve is located in an area identified as having a low sensitivity for archaeological or historic resources. The MCOSD conducted a records search indicating that others have previously examined a majority of the parcels within the preserve for cultural resources with negative results (ARS 2016).

CEQA PROCESS

CEQA defines a program EIR as a document that may be prepared on a series of actions characterized as one large project and related geographically or in connection with the development of a plan. In this case, the RTMP is a planning document covering the 34 open space preserves managed by the MCOSD, and therefore, is one large project with a geographic and a planning connection. CEQA allows a lead agency to examine subsequent activities in light of the program EIR to determine whether an additional environmental document must be prepared.

3. If the agency determines that the later activity would have effects that were not examined in the program EIR, it will prepare a new negative declaration or EIR
4. If the agency finds that no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.

CEQA also requires the agency to incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program. The advantage of this process is that the lead agency may rely on the program EIR: (1) as a basis for determining whether the subsequent activity may have any significant effects; (2) rely on the program EIR to address regional influences, secondary effects, cumulative, impacts, broad alternatives, and other factors that apply to the program; and (3) focus an EIR on subsequent projects to permit discussions solely of new effects.

SURROUNDING LAND USES AND SETTING

The project site is located in the Gary Giacomini Open Space Preserve in west Marin County near the communities of Woodacre, San Geronimo, Forest Knolls, and Lagunitas. Adjoining land uses

around the preserve include the Mount Tamalpais Watershed managed by Marin Municipal Water District to the south and single-family residents to the north.

REQUIRED APPROVALS

The project does not require permit from the US Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, or the California Department of Fish and Wildlife, because it does not include the placement of fill into waters, including wetlands, of the US or California or require alteration of a stream or lake. Finally, the project is not within the coastal zone and does not require permits from the California Coastal Commission or the San Francisco Bay Conservation and Development Commission.

REFERENCES

- Aerial Information Systems, Inc., 2008. *Marin County Open Space District Vegetation Mapping, Photo Interpretation and Mapping Classification Report*.
- Archaeological Resource Service (ARS), 2016. A letter providing cultural resource evaluation for four trails at the Gary Giacomini Open Space Preserve. Addressed to James Raives, Marin County Parks, July 01.
- County of Marin, 2007 *Marin Countywide Plan*, November.
- Campo, Jon, Marin County Open Space District, 2016. Email communication with C. Richardson, July 05, 2016
- Gold Ridge Resource Conservation District (RCD), 2016. *Giacomini Trails Scoping Project, Gary Giacomini Open Space Preserve, Marin County Open Space District, Marin County, California*, May 2016.
- Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.
- Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.
- Marin County Open Space District (MCOSD), 2015. *Draft Vegetation and Biodiversity Management Plan*, April.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This project will potentially affect environmental factors checked below and the initial study evaluates these issues.

<input checked="" type="checkbox"/> Aesthetics	<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Greenhouse Gas Emissions
<input checked="" type="checkbox"/> Land Use & Land Use Planning	<input type="checkbox"/> Population & Housing	<input checked="" type="checkbox"/> Transportation & Traffic
<input type="checkbox"/> Agriculture & Forestry Resources	<input checked="" type="checkbox"/> Cultural Resources	<input checked="" type="checkbox"/> Hazards & Hazardous Materials
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Public Services	<input type="checkbox"/> Utilities & Service Systems
<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Geology, Soils, & Seismicity	<input checked="" type="checkbox"/> Hydrology & Water Quality
<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Recreation	<input checked="" type="checkbox"/> Mandatory Findings of Significance

Determination

Marin County
Environmental Coordination and Review

On the basis of this evaluation, the proposed project would not have a significant effect on the environment that has not been previously addressed in the 2014 RTMP TPEIR, and no new mitigation measures are required.

Mitigation Measures:

(Select one of the following statements)

- The initial study did not identify any potential adverse impacts and, therefore, the project does not require mitigation measures.
- The initial study incorporates all relevant policies and best management practices identified in the Road and Trail Management Plan and no additional mitigation measures are required
- The initial study incorporates all relevant policies and best management practices identified in the Road and Trail Management Plan and recommends additional mitigation measures. Please refer to additional mitigation measures in the attached initial study.
- The initial study concludes that the District can modify the project's potential adverse impacts, as noted under the following factors in the attached in the initial study.

The District has incorporated into the project all of the mitigation measures described in the attached initial study.

Preparation:

The Marin County Open Space District prepared this negative declaration and interested parties may obtain copies at the address listed below.

Marin County Open Space District
3501 Civic Center Drive, #260
San Rafael, CA 94903

Monday through Friday
8:30 a.m. to 4:30 p.m.
Telephone (415) 473-3745

INTRODUCTION

As stated earlier, this initial study tiers from the RTMP Program EIR (State Clearinghouse Number 2011012080) that was certified as meeting the requirements of the CEQA on December 16, 2014 by the MCOSD Board of Directors (MCOSD, 2014a and 2014b). The Program EIR addressed the environmental impacts of the RTMP, and the proposed project is part of the implementation of the RTMP.

The BMPs will reduce potential environmental impacts of implementing the RTMP. This Initial Study incorporates the appropriate BMPs relevant to the proposed project (see the above project description).

REFERENCES

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

AESTHETICS

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporated	Additional Analysis Concludes Less Than Significant Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The RTMP EIR described the visual quality of Marin County as follows:

Marin County has a unique visual environment with an attractiveness and diversity of landscape that includes views of open space, ocean vistas and beaches, the San Francisco Bay shoreline, hills and ridgelines, agriculture lands, stands of various types of trees, and other natural features. As of 2003, nearly half of the county's land base was protected by park or open space status. With the largest amount of public land in the nine-county Bay Area, Marin County's 118,669 acres of park and open space made up 30 percent of the county's land

base, while water area and watershed lands comprised another 20 percent. Agriculture, mainly cattle grazing, and privately-owned open space contracts occupied 26 percent of the county's land base (MCOSD 2014a).

- a) *Would the project have a substantial adverse effect on a scenic vista?*

No Additional Analysis Required

The RTMP EIR concluded that the RTMP's implementation would have less than significant impacts on a scenic vista. This conclusion is based on the fact that, although the plan could result in an increase in visual impacts from additional maintenance and construction within the open space preserves, these impacts would not be significant because:

Modifications to the visual environment due to the construction of new or rerouted trails would be small in scale and not very visually intrusive. Construction-related visual impacts would be temporary, ceasing once construction was completed. In most cases, existing and new roads and trails would be screened by vegetation or hidden by topography. Even if the new road or trail is visible, these unpaved features do not block view of the landscape and are visually consistent with the open space nature of the preserves. Construction changes to the visual environment would not be perceptible or bothersome to most viewers (MCOSD 2014a).

Similar to that described in the RTMP EIR, the proposed project includes small modifications to the visual environment from constructing trail improvements, and decommissioning of trail segments. These improvements do not raise any impacts beyond those considered in the RTMP EIR. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Additional Analysis Required

The RTMP EIR concluded that there are no designated scenic highways in Marin County and that there would be no impact to scenic resources within a designated scenic highway or road (MCOSD, 2014a). The MCOSD reconfirmed with California Department of Transportation that there continues to be no designated scenic highways in Marin County (Caltrans 2016). Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

No Additional Analysis Required

The RTMP EIR concluded that the RTMP would have less than significant impacts on the existing visual character or quality of the open space preserves. This conclusion is based on the fact that,

although the plan could result in an increase in visual impacts from additional maintenance and construction within the open space preserves, these impacts would not be significant because:

Modifications to the visual environment due to the construction of new or rerouted trails would be small in scale and not very visually intrusive. Construction-related visual impacts would be temporary, ceasing once construction was completed. In most cases, existing and new roads and trails would be screened by vegetation or hidden by topography. Even if the new road or trail is visible, these unpaved features do not block view of the landscape and are visually consistent with the open space nature of the preserves. Construction changes to the visual environment would not be perceptible or bothersome to most viewers (MCOSD 2014a).

Similar to that described in the RTMP EIR, the proposed project includes small modifications to the visual environment from the constructing trail improvements, and decommissioning of trail segments. These improvements do not raise any impacts beyond those considered in the RTMP EIR. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Additional Analysis Required

The RTMP EIR concluded that the plan would not create new sources of substantial light or glare that would adversely affect day or nighttime views in the preserves. Specifically, the EIR concluded that:

As undeveloped open space, the MCOSD preserves do not contain any existing lighting, except for aircraft hazard and security lighting associated with utility and communications facilities that exist within the preserves. Implementation of the RTMP would not introduce any new source of light or glare within the MCOSD's open space preserves. No aspect of implementing the RTMP would modify or increase lighting associated with aircraft hazard or utility security lighting. Because implementation of the RTMP would not include any lighted feature or new source of lighting, there would be no impact and no mitigation would be necessary (MCOSD, 2014a).

Similar to that described in the RTMP EIR, the proposed project includes new sources of light or glare. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

REFERENCES

California Department of Transportation (Caltrans) 2016,
http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. viewed on July, 01.

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan
Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

• **AGRICULTURAL AND FORESTRY RESOURCES**

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporated	Additional Analysis Concludes Less Than Significant Impact
II. AGRICULTURAL AND FORESTRY RESOURCES				
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 a non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forestland (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))?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forestland or conversion of forestland to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland of Statewide Importance to non-agricultural use or conversion of forestland to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) <i>Would the project 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 a non-agricultural use?</i>				

No Additional Analysis Required

The RTMP EIR concluded that the plan would not convert prime, unique, statewide important farmland in the open space preserves. Specifically, the EIR concluded that:

(pg. 14-8) Although minor amounts of important farmlands, lands protected by Williamson Act contracts and existing agricultural uses are located within the MCOSD preserves, none of the programs, policies, standards, or BMPs set forth in the RTMP would interfere with the continuation of these existing agricultural uses. This impact would be less than significant, and no mitigation would be necessary.

The proposed project is consistent with the RTMP EIR, in that it will not convert any important or protected farm lands. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Additional Analysis Required

See the discussion section a) above.

- c) *Would the project conflict with existing zoning for, or cause rezoning of, forestland (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))?*

No Additional Analysis Required

The RTMP EIR concluded that the plan would not conflict with existing zoning for, or cause rezoning of, forestland or timberland zoned in the open space preserves. Specifically, the EIR concluded that:

(pg. 14-8) None of the preserves are zoned for forest land, timberland, or Timberland Production. No timber management activities occur on the preserves and there is no designated commercial forest land within the preserves. Because no important commercial timberlands or forest resources exist within the preserves, the RTMP would not result in the loss or conversion of timberland or forest lands to other uses. No impact would occur, and no mitigation would be necessary.

The proposed project is consistent with the RTMP EIR, in that it will not conflict with existing zoning for, or cause rezoning of, forestland or timber land. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- d) *Would the project result in the loss of forestland or conversion of forestland to non-forest use?*

No Additional Analysis Required

The RTMP EIR concluded that the plan would not result in the loss of forestland or conversion of forestland to non-forest use in the open space preserves. Specifically, the EIR concluded that:

(pg. 14-8) None of the preserves are zoned for forest land, timberland, or Timberland Production. No timber management activities occur on the preserves and there is no designated commercial forest land within the preserves. Because no important commercial timberlands or forest resources exist within the preserves, the RTMP would not result in the loss or conversion of timberland or forest lands to other uses. No impact would occur, and no mitigation would be necessary.

As described in the RTMP EIR, there is no important commercial forestland within the open space preserves. The purpose of the open space preserves is to protect natural resources, including

forest resources, within the protected areas and the MCOSD does not allow any timber production on its land. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

- e) *Would the project involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forestland to non-forest use?*

No Additional Analysis Required

The RTMP EIR concluded that the plan does not result other changes that could result in the conversion of farmland or forestland. Specifically, the EIR concluded that:

(pg. 14-9) Because recreational use of roads and trails is generally consistent with grazing or other low intensity agricultural uses, no other changes would result from implementation of the RTMP that would lead to the conversion of any farmland or timber land to other uses, as the RTMP would not change any land uses.

As described in the RTMP EIR, the recreational use of roads and trails are generally consistent with grazing or other agricultural or forestry uses. As described above, there is no forestry production within the open space preserves and agricultural use is limited to low intensity grazing for the purposes of vegetation management. Therefore, the RTMP EIR adequately addressed this issue and the proposed project does not require additional analysis of the impacts on visual resources.

REFERENCES

California Department of Conservation, 2012. Website: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/mar12.pdf>, accessed February 11, 2016.

• **AIR QUALITY**

III. AIR QUALITY. Would the project:	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporated	Additional Analysis Concludes Less Than Significant Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

No Additional Analysis Required

According to the RTMP EIR, the air quality in Marin County is generally very good. As indicated in RTMP EIR, with the exception of PM10 and PM2.5, the San Rafael air quality monitoring station has not reported any exceedances of ambient air quality standards over the past five years. The project site is located within the boundaries of the Bay Area Air Quality Management District (BAAQMD). The EIR on the RTMP states that implementation of the RTMP (which covers the proposed trail project) would not conflict with the goals of the 2010 Bay Area Clean Air Plan (CAP) because the RTMP adopts all appropriate measures contained within the 2010 CAP. The BAAQMD 2010 CAP includes a control measure (MSM C-1 – Construction and Farming Equipment) that is applicable to construction equipment that would reduce emissions from this equipment by encouraging the retrofit of engines with diesel particulate filters or upgrading the equipment to lower emissions machinery, in addition to the use of renewable electricity and renewable fuels. The RTMP includes the following systemwide policy to include the air quality plan measure cited above:

Policy SW.27: Retrofit or Upgrade Construction Equipment. Work with the Bay Area Air Quality Management District to implement feasible actions from the 2010 Clean Air Plan MSM C-1 – Construction and Farming Equipment. Pursue funding to retrofit the existing construction equipment engines with diesel particulate filters or upgrade to equipment with electric, Tier III, or Tier IV off-road engines. Seek to rent construction equipment that meets these criteria, if available (MCOSD 2014b).

Based on this policy, the RTMP concluded that projects implemented under the plan would not conflict with or obstruct implementation of the CAP. Specifically, the RTMP EIR concludes that:

(pg. 5-15) The RTMP is intended to enhance recreational opportunities for residents and visitors and manage long-term use of the roads and trails in the MCOSD. The proposed RTMP project is not expected to increase population or visitors within the preserves, but the enhancements could result in minor increases in system use and an increase in the intensity of use at certain locations. The proposed RTMP project criteria air emissions are not expected to exceed thresholds, and the project would comply with applicable BMPs of the BAAQMD as described above and include all feasible control measures included in the AQP. For these reasons, this would be a less-than-significant impact (MCOSD 2014a).

With respect to the proposed project, the MCOSD is proposing to adopt an existing network of unsanctioned trails and abandoned unpaved roads with improvements that include modifications to existing trails to install water-control features, widen narrow sections of existing unsanctioned trail, and reducing the width of existing abandoned roads. Additionally, the project includes decommissioning existing portions of the existing network. As described in the RTMP, the MCOSD will be using the MCOSD uses an excavator, dozer, smooth drum roller, skip loader, trail dozer, side mount mower, rear flail mower, and mini excavator to implement the proposed project. As required by RTMP Policy SW.27, the MCOSD is pursuing retrofits and upgrades to existing construction equipment. Therefore, the proposed project is consistent with the air quality analysis in the RTMP EIR, and does not require additional analysis.

b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

No Additional Analysis Required

The RTMP EIR concludes that projects implemented under this plan would generate temporary impacts to air quality during construction and from vehicles used to access the site for recreational purposes. However, the RTMP concludes that this impact would not be significant. The RTMP EIR states that:

(pg. 5-16) Construction emissions associated with the RTMP planned reconstruction, rerouting, active decommissioning, and active road-to-trail conversion activities would include exhaust emissions from diesel-powered equipment, fugitive dust from earthmoving activities, and indirect emissions from construction and employee vehicles to and from the MCOSD trails. These construction improvements would occur at various locations throughout the MCOSD preserve system, which are currently unknown and not specifically identified by the RTMP. The majority of construction activities would occur from April to October, but would vary from day to day and year to year depending on the prioritization of trail projects. The RTMP does not propose an increase in maintenance or construction activities, but rather would act to manage road and trail maintenance and construction more efficiently and effectively. The implementation of the RTMP could result in an increase of maintenance activities required in discrete locations in order to reduce existing adverse effects to satisfy the concept of net environmental benefit or to better maintain areas affected by

increased use. However, this would not result in a significant, measurable increase in construction-related emissions from existing conditions.

(pg. 5-16) Operational air quality emissions would be considered indirect emissions of air pollutants from on-road vehicles transporting visitors and employees to and from trailheads. While there may be increased visitation at MCOSD trails in the future, the RTMP is not designed to increase visitation and any increases in vehicle trips are likely resulting from population growth or changes in the popularity of recreational activities. However, since the RTMP would enhance recreational opportunities, the RTMP could indirectly result in minor increases in system use, and there could be minimal increases in operational emissions as a result of the RTMP.

As described in Section IIIa above, the MCOSD is proposing to adopt an existing network of unsanctioned trails and abandoned unpaved trails with improvements that include modifications to existing trails to install water-control features, widen narrow sections of existing unsanctioned trail, and reducing the width of existing abandoned roads. Additionally, the project includes decommissioning existing portions of the existing network. Consistent with the RTMP, the MCOSD will implement the required Air Quality BMPs. Table 1 Air Quality BMPs lists the RTMP air quality measures that are incorporated into this project.

Table 1 Air Quality BMPs

BMP	Title ²
Air Quality-1	Implement BAAQMD Measures
Air Quality-2	Minimize Dust Control Emissions during Construction
Air Quality-3	Enhanced Dust Control during Construction
Air Quality-4	Dust Control during Construction in Sensitive Resource Areas

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Contour/Candelerio complex will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the air quality analysis in the RTMP EIR, and does not require additional analysis.

- c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?*

No Additional Analysis Required

As discussed under (b) above, the proposed air quality impacts from the proposed project is consistent with the RTMP EIR and does not raise any issues that require additional analysis. Based on the discussion in Section IIIb above, the proposed project is consistent with the air quality

² See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014

analysis in the RTMP EIR and does not require additional evaluation or mitigation measures beyond those identified in the RTMP and its program EIR.

d) *Would the project expose sensitive receptors to substantial pollutant concentrations?*

No additional Analysis Required

The RTMP EIR concludes that the plan would have “No Impact” on the potential to expose sensitive receptors to substantial pollutant concentrations. Specifically, the EIR stated that:

(pg. 5-12) The RTMP project would not result in a long-term increase in the use of TAC-containing products (fuels, maintenance products), nor would the project introduce sensitive receptors near to existing TAC sources. Even though the distance to nearest residences, schools, and medical facilities (sensitive receptors) varies throughout the MCOSD road and trail system, cancer risk associated with diesel exhaust exposure is typically associated with chronic exposure, and would be considered less than significant during construction since the exposure would be temporary and no single location would be exposed to continuous construction emissions. There would be no operational emissions of TACs as a result of the RTMP project (MCOSD, 2014a).

As described in the EIR, there would be no operational emissions of TACs as a result of the RTMP project. The proposed project is consistent with the analysis of impacts in the RTMP TPEIR therefore no additional analysis is required.

e) *Would the project create objectionable odors affecting a substantial number of people?*

No Additional Analysis Required

The project would generate localized emissions of diesel exhaust during construction equipment operation. These emissions may be noticeable from time to time by adjacent receptors and nearby residents. However, the emissions are not likely to have adverse effects on surrounding uses to such an extent that people would file odor complaints. After construction, the project would not include any sources of significant odors that would cause complaints from surrounding uses. The project’s odor impact would therefore be less than significant, and it does not require additional mitigation measures.

REFERENCES

Bay Area Air Quality Management District (BAAQMD), 2012. *Bay Area Air Quality District CEQA Air Quality Guidelines*, May.

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

BIOLOGICAL RESOURCES

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporated	Addition al Analysis Conclude s Less Than Significa nt Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The RTMP EIR describes the biological resources of Marin County as follows:

(pg. 6-4) Marin County supports 171 rare plants, including 17 known from nowhere else in the world; 51 of these have been documented from MCOSD lands (Calflora 2012, Howell et al. 2007). Marin western flax (Hesperolinon congestum), Tiburon paintbrush (Castilleja affinis ssp. neglecta), and Tiburon buckwheat (Eriogonum luteolum var. caninum) are serpentine endemics that are closely associated with Tiburon mariposa lily (Calochortus tiburonensis), a species known to occur only on serpentine grasslands in the Ring Mountain Preserve. A list of all special-status plant species documented within three miles of all 34 preserves and their potential to occur within the preserves themselves is included in Appendix C.

Diverse vegetation communities and open space contribute to high-quality wildlife habitat within the preserves. Eleven special-status wildlife species have been documented from MCOSD lands. Northern spotted owls (Strix occidentalis caurina) are found within dense, old-growth forests, while shaded streams buffered from erosion by natural vegetation within preserves provide habitat for salmonids, such as steelhead (Onchorhynchus mykiss irideus), coho salmon (Oncorhynchus kisutch), and chinook salmon (Oncorhynchus tshawytscha) (see "Hydrologic Resources," below). Perennial wetlands and open waters provide breeding habitat for the endangered California red-legged frog (Rana draytonii), while California clapper rail (Rallus longirostris obsoletus), California black rail (Laterallus jamaicensis), and salt marsh harvest mouse (Reithrodontomys raviventris halicoetes) occupy marshes in Richardson and San Pablo Bays.

The assessment of biological resources in the proposed project area is based on a review by the MCOSD's Natural Resources staff (MCOSD 2016). In accordance with BMP Special-status Wildlife -1, MCOSD's Biologist conducted a literature review of the MCOSD's database of special-status wildlife occurrences and sensitive habitats, California Department of Fish and Wildlife Natural Diversity Database records and the U.S. Fish and Wildlife Service quadrangle species list. The biological communities of the project area were classified as sensitive or non-sensitive as defined by CEQA. Documents prepared by the MCOSD's staff consist of a staff assessment of the existing biological resources on the site, and are available for review at the offices of the MCOSD. The MCOSD Natural Resources staff conducted several field visits as part of the project planning and vegetation management projects in the area to evaluate the biological conditions of the site. Per BMP Special-Status Wildlife-2 and Special-Status Plants-2, MCOSD biologists conducted site visits on July 11 and July 19 and conducted surveys to determine the likelihood of special-status species. MCOSD biologists identified the presence of *Strix occidentalis caurina* during these surveys.

A total of 6 vegetation-mapping units occur within the project study area, which includes the existing trails to be improved and adopted surrounding areas. Vegetation mapping units follow the MCOSD descriptions that it developed in the Classification of Vegetation Associations from the Marin County Open Space District in Marin County, California (Buck et. al. 2010) and the *Photo Interpretation and Mapping Classification Report* (AIS 2008). The proposed project site and the areas surrounding it include the following vegetation communities (Figure 13):

Redwood Riparian Association (*Sequoia sempervierens* Woodland/Forest)

Buck and Evens (2010) describe this vegetation community as having a sparse to intermittent tree layer (8.0-35%), with hardwoods at 20-50m tall (3.0-10%) and conifers at 20-35m tall (5.0-25%). Understory trees are sparse (5-10%) at 5-10m tall. The shrub layer is sparse (1.0-10%) with heights of 0.5-1m. The herbaceous layer is sparse to open (0.2-20%) at 0-1m tall. This vegetation community is found in elevations ranging between 310 and 398 ft. on slopes of 26 degrees.

Redwood-Tanoak Association (*Sequoia sempervirens-Lithocarpus densiflorus* Woodland/Forest)

Buck and Evens (2010) describe this vegetation community as having an intermittent tree layer (40.0%), with hardwoods at 20-35m tall (15.0%) and conifers at 35-50m tall (25%). Understory trees are sparse (3%) at 10-15m tall. The shrub layer is sparse (5.0%) with heights of 1-2m. The herbaceous layer is sparse (0.2%) at 0-0.5m tall. Total vegetation cover is 45.0%. This vegetation community is found in elevations of 221 ft. on slopes of 28 degrees.

Redwood-Douglas-fir Association (*Sequoia sempervirens-Pseudotsuga menziesii* Woodland/Forest)

Buck and Evens (2010) describe this vegetation community as having an intermittent tree layer (40.0%), with hardwoods at 20-35m tall (10.0%) and conifers at 35-50m tall (30%). Understory trees are sparse (7%) at 5-10m tall. The shrub layer is sparse (1.0%) with heights of 1-2m. The herbaceous layer is open (15.0%) at 0-0.5m tall. Total vegetation cover is 63.0%. This vegetation community is found in elevations of 224 ft. on slopes of 28 degrees.

Douglas-fir Mixed Hardwood Association (*Pseudotsuga menziesii* Woodland/Forest)

Buck and Evens (2010) describe this vegetation forming an open tree layer (16.5%), with hardwoods at 5-10 m tall (8.5%) and conifers at 5-10 m (8%). Understory trees cover is sparse (0.2%). The shrub layer is open (14%) with heights of 1-2m. The herbaceous layer is sparse (0.2%) at 0-0.5m tall. Total vegetation cover is 30%. This vegetation community is found in elevations of 444 ft. and 0 degree slopes.

Douglas-fir Alliance (*Pseudotsuga menziesii* Woodland/Forest)

Buck and Evens (2010) describe this vegetation community as having an open to intermittent tree layer (22.0-60%), with conifers at 10-50m tall (20.0-60%) and hardwoods absent to sparse at 0.5-1m tall (0.0-2%). Understory trees form sparse cover (0.2-1%) and are 1-10m tall. The shrub layer is absent to sparse (0.0-3%) with heights of 1-2m. The herbaceous layer is sparse (0.2-4%) at 0-0.5m tall. Total vegetation cover is 33.0-62%. This vegetation community is found in elevations ranging from 348 to 1254 ft and slopes that range from 25 to 28 degrees.

Douglas-fir-Tanoak Association (*Pseudotsuga menziesii-Lithocarpus densiflorus* Woodland/Forest)

Buck and Evens (2010) describe this vegetation community as having an intermittent tree layer (40.0%), with hardwoods at 20-35m tall (30.0%) and conifers at 35-50m tall (10.0%).

Understory tree from a sparse cover (2%) and are 5-10m tall. The shrub layer is sparse (0.2%) with heights of 5-10m. The herbaceous layer is sparse (0.2%) at 0-0.5m tall. Total vegetation cover is 45%. This vegetation community is found in elevations of 1517 ft. with slopes of 14 degrees.

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

No additional Analysis Required

The RTMP EIR concluded that construction and maintenance activities on existing roads and trails have the potential to disrupt sensitive wildlife species, and to continue to degrade sensitive plants and habitats in areas where roads and trails are improperly sited. However, the RTMP concludes that this impact would not be significant. The RTMP EIR states that:

(pg. 6-52) Construction of new roads or trails, the maintenance of existing facilities, or changes in the location or intensity of use could adversely affect sensitive wildlife and plant species or their habitats located within or adjacent to a work area, or in areas of increased use. However, with implementation of the policies, procedures, and BMPs identified in the Marin Countywide Plan and the RTMP, this impact would be less than significant.

(pg. 6-89) As set forth in the reasoning expressed in Table 6-4 through Table 6-8, implementation of existing state and federal requirements and Marin County and MCOSD policies, together with new policies, road standards, permitting requirements, and BMPs set forth in the RTMP, would in aggregate reduce or avoid adverse effects to sensitive biological resources. Implementation of the existing Marin County and MCOSD policies identified in Table 6-4 would act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP BMPs identified in Table 6-5 would result in a reduction in roads and trails in sensitive areas of the preserves, and would direct new facility location, construction, uses, and maintenance to avoid sensitive biological resources. Policies and BMPs that would be implemented with adoption of the RTMP as set forth in Table 6-4, Table 6-5, and Table 6-6 would result in further protection of biological resources from adverse effects caused by management actions associated with the RTMP by establishing procedures and performance standards for sensitive biological resources to be followed in the design, construction, and maintenance of existing and new trails. Special permit requirements as set forth in Table 6-7 would require that the MCOSD evaluate the potential effects of non-recreational and larger scale recreation uses to determine what adverse environmental impacts such activities could pose, and to implement conditions to avoid or reduce such effects. Road and trail design and operational standards identified in Table 6-8 would avoid or reduce potential environmental effects from existing and new roads and trails, and from decommissioned facilities by controlling erosion, drainage, and crossings of sensitive resources.

The roads and trails in the proposed project are currently used by hikers, cyclists and equestrians. Upon completion of the project, the roads and trails will be designated for use by hikers and cyclists only, with the exception of the Contour trail which will allow use by hikers, bikers and equestrians. Given the remote location of these trails and the lack of any parking infrastructure for the preserve,

a significant increase in use is not likely. No data exists which provides a quantitative understanding of the existing intensity of use of roads and trails in the proposed project. Section 6 of the RTMP TPEIR provides an in depth discussion of the existing research regarding the effects of cycling, hiking and mountain biking on wildlife. The RTMP TPEIR concludes that it is possible that impacts to sensitive habitats could occur in the course of closing portions of the existing road and trail network and building/maintaining new roads and trails; however these impacts would be less than significant. The RTMP TPEIR states that:

(pg. 6-95) As discussed in Impact BIO-1, MCOSD lands contain diverse vegetation communities, including sensitive riparian, oak woodland, serpentine, and ultramafic soils habitats. The protection and preservation of these sensitive habitats is a key goal of the RTMP, including the preservation of pristine or near-intact habitats, diversion of high-intensity uses from sensitive habitats, and the incorporation of BMPs designed to avoid and protect sensitive resources to the maximum extent possible. However, it is possible that impacts to sensitive habitats could occur in the course of closing portions of the existing road and trail network and building/maintaining new roads and trails, or changed trail use as discussed above. Incorporation of restrictions on construction staging areas, buffers around sensitive resources, mandatory worker training, and other measures would reduce potential impacts to a less-than-significant level. Applicable BMPs for riparian and other sensitive habitats are discussed in Table 6-4 through Table 6-8 and would be incorporated as appropriate during implementation of the RTMP.

The RTMP TPEIR discusses potential impacts to wildlife from cyclists using the preserves at night by reviewing current studies on impacts of artificial lighting on the wildlife. It concluded that there is a potential for a significant impact, but since there is no consensus on thresholds for this impact and mitigation measures, it cannot determine if this impact is significant or if there are feasible mitigation measures available to address this potential impact.

The MCOSD is proposing to adopt an existing network of unsanctioned trails and abandoned unpaved roads with improvements that include modifications to existing trails to install water-control features, widen narrow sections of existing unsanctioned trail, and reducing the width of existing abandoned roads. Additionally, the project includes decommissioning existing portions of the existing network. MCOSD biologists conducted special-status species survey of the project area and did not identify any special-status species plant species, and one special-status wildlife species (*Strix occidentalis caurina*). The MCOSD contracted with Avocet Research Associates to prepare biological report on the impact from implementing the Gary Giacomini trails project on northern spotted owls. In that report, the biologists provide several recommendations when working on trail projects within occupied northern spotted owl habitat. These recommendations along with standard RTMP BMPs related to work near sensitive species will assist the MCOSD's biologist in developing a construction monitoring program per RTMP BMP Special-Status Wildlife-9.

Consistent with the RTMP, the MCOSD will implement the required BMPs and impacts to these special-status species will be avoided. Table 1 Air Quality BMPs lists the RTMP BMPs related to Biological Resources that are incorporated into this project.

Table 2 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) Related to Biological Resources

BMP	Title ³
General-1	Limit Work Area Footprints in Sensitive Resource Areas
General-2	Modify Construction Related Vegetation Management Methods in and near Wetlands, Riparian Vegetation
General-3	Minimize Potential for Erosion
Gener-4	Control Food Related Trash
General-5	Modify Construction Methods Relating to Soil Disturbance, Restrict use of Offsite Soil, Aggregate, or Other Construction Materials
General – 6	Prevent or Reduce Potential for Pollution
General – 8	Control Noise
General – 9	Conduct Worker Training
General – 10	Road and Trail Inspections
General – 11	Management of Sudden Oak Death
Sensitive Natural Resources – 1	Modify Management Practices near Sensitive Natural Resources
Special–Status Wildlife – 1	Literature Reviews
Special–Status Wildlife – 2	Preconstruction Surveys
Special–Status Wildlife – 3	Seasonal Restrictions During Bird Nesting Season
Special–Status Wildlife – 4	Avoidance and Protection of Northern Spotted Owl
Special–Status Wildlife – 8	Worker Awareness Training
Special–Status Wildlife – 9	Construction Monitoring
Special–Status Wildlife – 10	Relocation of Special-Status Species
Special–Status Wildlife – 11	Noise Control
Special–Status Wildlife – 12	Trash Control
Special–Status Plant – 1	Literature Reviews
Special–Status Plant – 2	Avoidance and Protection of Special-Status Plant Species near Road and Trail Management Projects
Special–Status Plant – 4	Earthwork near Special-Status Plant Populations
Special–Status Plant – 5	Erosion Potential near Special-Status Plants
Special–Status Plant – 6	Prevent Introduction of Invasive and Nonnative Plants and Plant Material
Special–Status Plant – 7	Revegetation with Native, Geographically Appropriate Plant Species
Special–Status Plant – 8	Worker Awareness Training
Special–Status Plant – 9	Relocation of Special-Status Plants
Special–Status Plant – 10	Road and Trail Inspections
Special–Status Plant – 11	Reuse and Replanting of Native Trees and Shrubs
Special–Status Plant – 12	Ripping and Recontouring Roads
Sensitive Natural Resources – 1	Modify Management Practices near Sensitive Natural

³ See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014

BMP	Title ³
Resources	

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Contour/Candelerio complex will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

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

No additional Analysis Required

The RTMP EIR concluded that construction of new roads and trails, the maintenance of existing facilities, or changes in the location, type, or intensity of recreation uses could adversely affect riparian habitat or other sensitive natural communities. However, the RTMP concludes that this impact would not be significant. The RTMP EIR states that:

(pg. 6-95) As set forth in the reasoning expressed in Table 6-4 through Table 6-9, implementation of existing Marin County and MCOSD policies, together with new policies, road standards, permitting requirements, and BMPs set forth in the RTMP, would in aggregate reduce or avoid adverse effects to riparian areas and sensitive habitats. Implementation of the existing Marin County and MCOSD policies identified in Table 6-4 would act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP policies identified in Table 6-4 would result in a reduction in roads and trails in sensitive areas of the preserves, and would direct new facility location, construction, uses, and maintenance to avoid riparian areas and sensitive habitats. Further, policies as set forth in Table 6-5 through Table 6-9 address the appropriate use of trails by pedestrians, equestrians, mountain bicyclists, and visitors with dogs, and would direct use towards the appropriate locations to avoid wildlife, riparian areas, and sensitive habitats. Particularly, Policy SW.4, which focuses on the overall reduction of road, trail, and visitor impacts, is a new policy stating that the overall goal of the RTMP is to reduce impacts from road, trails, and visitors. This is a critical policy that states that the purpose of the plan is to reduce the overall environmental effect of the road and trail system from its baseline condition. It also provides clear direction to maximize reduction of impacts in areas identified as a Sensitive Resource Area.

Consistent with the RTMP, the MCOSD will implement the required BMPs. Table 2 lists the RTMP BMPs related to Biological Resources that are incorporated into this project. With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Contour/Candelerio complex will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

- c) *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means?*

No additional Analysis Required

The RTMP EIR concluded construction of new roads or trails, and the maintenance of existing facilities could adversely affect protected wetlands located within or adjacent to a work area. However, the RTMP concludes that this impact would not be significant. The RTMP states that:

(pg. 6-106) As set forth in the reasoning expressed in Table 6-4 through Table 6-10, implementation of existing Marin County and MCOSD policies, together with new policies, road standards, permitting requirements, and BMPs set forth in the RTMP, would in aggregate reduce or avoid adverse effects to wetlands. Implementation of the existing Marin County and MCOSD policies identified in Table 6-4 would act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP policies identified in Table 6-4 would result in a reduction in roads and trails in sensitive areas of the preserves, and would direct new facility location, construction, uses, and maintenance to avoid wetland habitats. The MCOSD will implement RTMP policies and BMPs (see Table 6-4, Table 6-5, Table 6-6, and Table 6-7) that will result in further protection of wetland habitats from adverse effects. Special use requirements as set forth in Table 6-7 would require that the MCOSD evaluate the potential effects of non-recreational and larger scale recreation uses to determine adverse environmental impacts of such activities and to implement conditions to avoid or reduce such effects. Road and trail design and operational standards identified in Table 6-8 would avoid or reduce potential environmental effects from existing and new roads and trails, and from decommissioned facilities by controlling erosion, drainage, and impacts to sensitive resources.

The measures referenced in this impact discussion and set forth in Table 6-4 through Table 6-8, and Table 6-10 would be followed by the MCOSD, its representatives, and project contractors as applicable and appropriate. Additionally, the MCOSD will comply for all appropriate permits and consultation requirements of state and federal resource and regulatory agencies, including the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the San Francisco Bay Regional Water Quality Control Board. As a result, at a programmatic level, no significant impacts to federally-protected wetlands are anticipated as a result of the proposed RTMP, and no mitigation would be necessary.

Consistent with the RTMP, the MCOSD will implement the required BMPs. Table 1 Air Quality BMPs lists the RTMP BMPs related to biological resources that are incorporated into this project. Table 3 below lists the RTMP BMPs related to riparian and other sensitive habitats that are incorporated into this project. With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Contour/Candelero complex will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is

consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

Table 3 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) Related to Riparian and Other Sensitive Habitats

BMP	Title ⁴
Water Quality – 1	Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas
Water Quality – 2	Temporary Erosion and Sediment Control
Water Quality – 3	Erosion Control Measures
Water Quality – 4	Preventing or Reducing the Potential for Pollution
Water Quality – 5	Road and Trail Inspections
Water Quality – 6	Grading Windows
Water Quality – 8	Proper Disposal of Excess Materials
Water Quality – 9	Sidecasting Construction Material

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

No Additional Analysis Required

The RTMP EIR concluded that construction and maintenance activities on existing roads and trails, or changes in the location or intensity of recreational uses have the potential to disrupt wildlife movement, migratory corridors, or nursery sites, and to continue to degrade these aspects of wildlife habitat in areas where roads and trails are improperly sited. However, the RTMP concludes that this impact would not be significant. The RTMP states that:

(pg. 6-108) As set forth in the reasoning expressed in Table 6-4 through Table 6-8, and Table 6-11, implementation of existing Marin County and MCOSD policies, together with new policies, road standards, permitting requirements, and BMPs described in the RTMP, the proposed plan would reduce or avoid adverse effects to wildlife movement, migratory corridors, and nursery sites. New RTMP policies identified in Table 6-4 would result in a reduction in roads and trails in sensitive areas of the preserves, and would direct new facility location, construction, uses, and maintenance to avoid areas important for wildlife movement, migratory corridors, and nursery sites. The RTMP policies and BMPs would establish procedures and performance standards for sensitive biological resources in the design, construction, and maintenance of existing and new trails. Special permit requirements as set forth in Table 6-7 would require that the MCOSD evaluate the potential effects of non-recreational and larger scale recreation uses to determine their adverse environmental impacts and appropriate

⁴ See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014

avoidance and mitigation measures. Design and operational standards identified in Table 6-8 would avoid or reduce potential environmental effects from roads and trails projects by controlling erosion and drainage, and avoiding impacts to sensitive resources.

The practices described in Table 6-4 through Table 6-8, and Table 6-11 would be followed by the MCOSD, its representatives, and project contractors as applicable and appropriate. Additionally, the MCOSD will comply with all appropriate permit and consultation requirements from the state and federal regulatory and resource agencies. As a result, the RTMP will not result in significant impacts to native resident or migratory fish or wildlife species movement, migratory corridors, or nursery sites. This would be a less-than-significant impact and no mitigation would be necessary.

Consistent with the RTMP, the MCOSD will implement the required BMPs. Table 2 lists the RTMP BMPs related to Biological Resources that are incorporated into this project. With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Contour/Candelerio complex will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

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

No additional Analysis Required

The RTMP EIR concluded that projects implemented through the RTMP would not result in significant conflicts with applicable local policies or ordinances due to the incorporation of all applicable policies, implementation measures and BMPs into the RTMP. The RTMP states that:

(pg.6-109) Implementation of the RTMP would result in compliance with the goals of the Marin Countywide Plan, Marin County Local Coastal Program, and other applicable regulations. As set forth in the reasoning expressed in Table 6-4 through Table 6-11, implementation of the RTMP would assure compliance with the goals and requirements of these plans and regulations. Additionally, these policies would act to protect biological resources from the effects of maintaining and constructing roads and trails. New RTMP policies would result in a reduction in roads and trails activities in sensitive areas of the preserves. In addition, the RTMP policies and BMPs would establish procedures and performance standards to be followed in the design, construction, and maintenance of existing and new trails. Special permit requirements, as set forth in Table 6-7, would require that the MCOSD evaluate the potential environmental effects of and avoidance measures for non-recreational and larger scale recreation uses. Road and trail design and operational standards identified in Table 6-8 would control erosion and drainage, and minimize impacts to sensitive resources. The water quality BMPs cited in Table 6-10 would act to maintain water quality for the benefit of biological resources. Similarly, the RTMP policy set forth in Table 6-11 would maintain the quality of wildlife habitat by maintaining large blocks of intact habitat.

The policies, standards, and practices referenced in this impact discussion would be followed by the MCOSD, its representatives, and project contractors as applicable and appropriate. Additionally, the MCOSD will comply with all appropriated federal and state permit and consultation requirements. As a result, the RTMP will not result in significant conflicts with applicable local policies or ordinances. This would be a less-than-significant impact and no mitigation would be required.

Consistent with the RTMP, the MCOSD will implement this project using the required BMPs. A list of the BMPs incorporated into this project can be found in Table 2 and Table 3. In addition, the project is consistent with the relevant policies listed in Table 4. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

Table 4 Road and Trail Management Plan (RTMP) Policies and Programs Protective of Biological Resources Relevant to the Giacomini Trails Improvement Project

Policy	Title ⁵
BIO-4.14	Reduce Road Impacts in Stream Conservation Areas (SCA)
BIO-4.k	Located Trails Appropriately
BIO-5.f	Control Public Access
TRL-2.1	Preserve the Environment
TRL-2.a	Locate Trails to Protect Habitat
TRL-2.b	Design, Build and Manage Trails in a Sustainable Manner
TRL-2.c	Eliminate Trail Redundancy
TRL-2.p	Improve Code Compliance
Policy T1d	Bicycling and Saddle Animals
Policy SW.5	Policy on Pedestrian Activities
Policy SW.6	Prohibition on Off-Road or Off-Trail Equestrian Use.
Policy SW.7	Prohibition on Off-Road or Off-Trail Bicycle Use.
Policy SW.8	Prohibition on Off-Road or Off-Trail Pedestrians with Dogs or Other Domestic Animals.
Policy SW.9	Prohibition of Dogs within Sensitive Water Resources.
Policy SW.10	Policy on Leash Only Preserves.
Policy SW.11	Policy on Leash Requirements for Dogs
Policy SW.16	Prohibition of Uses
Policy SW.18	Unauthorized Trail Construction and Maintenance
Policy SW.19	Redundant Roads and Trails
Policy SW.20	Conversion of System Roads to Trails
Policy SW.21	Roads or Trails Serving Nonrecreational Uses
Policy SW.22	Protect High-Value Vegetation Types.
Policy SW.23	Identify High Value Biological Resources.
Policy SW.24	Minimize Intrusions into Larger Contiguous Habitat Areas and Wildlife Corridors.

Note: See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014.

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

No Impact

There are no adopted habitat conservation plan, natural community conservation plan, or other conservation plan within, near, or affecting the proposed project. Therefore, the project will not conflict with any of these plans.

⁵ See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014

REFERENCES

- Buck, Jennifer and Julie Evens. 2010. *Classification of Vegetation Associates from the Marin County Open Space District in Marin County, California*. Prepared by Jenifer Buck and Julie Evens with the California Native Plant Society Vegetation Program in Cooperation with Mischon Martin with the Marin County Department of Parks and Open Space. March.
- Gold Ridge Resource Conservation District (RCD). 2016. *Gary Giacomini Trails Scoping Project, Gary Giacomini Open Space Preserve*. February.
- Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.
- Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

CULTURAL RESOURCES

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporate d	Additional Analysis Concludes Less Than Significant Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In 2014, the governor signed AB 52, which is a new requirement for lead agencies to consult with Native American tribes who have provided notice to the public agency of their interest in such a consultation. The County of Marin has received two such notices, one from the Federated Indians of Graton Rancheria (Rancheria) and one from the Lone Band of Miwok Indians. On February 3, 2016, the MCOSD sent a letter to the Rancheria and on March 15, 2016, sent another letter to the Lone Band of Miwok Indians. The MCOSD did not receive a reply from Lone Band of Miwok Indians Tribe, but did receive a letter of interest from the Rancheria. In response to that letter, the MCOSD provided additional information on the design of the site and implementation practices as defined in the RTMP in an email dated June 22, 2016, with a follow up email on July 20, 2016. As of the publication of this initial study, the MCOSD did not receive any comments from the Rancheria regarding additional mitigation measures. The MCOSD has made a good faith effort and consultation and fulfilled its legal obligation under AB 52.

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?*

No additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP could lead to substantial adverse changes in the significance of historical resources. However, the RTMP EIR concludes the impact would be less than significant with the implementation of RTMP systemwide policies and BMPs and that no mitigation would be necessary. Specifically, the RTMP states that:

(pg. 7-12) Construction of new roads or trails, the maintenance of existing facilities, or changes in the intensity or location of use with implementation of the RTMP could lead to substantial adverse changes in the significance of historic or cultural resources, or to an encounter of human remains within and adjacent to the MCOSD's open space preserves. The proposed RTMP contains systemwide policies and BMPs to protect cultural and historical resources, and human

remains from the potentially adverse effects of construction and management activities on known and unknown cultural sites within open space preserves. With implementation of RTMP systemwide policies and BMPs, no adverse effects would result, the impact would be less-than-significant, and no mitigation would be necessary.

Additionally, the RTMP EIR states that:

(pg. 7-18) Together, the Marin Countywide Plan policies, County ordinances, and RTMP systemwide policies and BMPs set forth in Table 7-2 would substantially reduce potential cultural and historical resource impacts. Local, state, federal, and RTMP requirements would reduce the potential for road and trail projects, including maintenance, construction, or changes in use or the location of use, within the MCOSD preserves to substantially affect historic resources. In aggregate, these requirements would ensure that the MCOSD applies a variety of protective measures and preservation efforts in the development, construction, and maintenance of roads and trails to minimize impacts to cultural and historical resources, and human remains. This would be a less-than-significant impact, and no mitigation would be necessary.

The MCOSD contracted with Archaeological Resource Service to evaluate the potential for historic resources. In a letter dated July 01, 2016, the contractor concluded that the project site is not likely to have any historical resources (ARS, 2016). Refer to the discussion under (b) below about the potential for discovery of unknown historic artifacts.

Consistent with the RTMP, the MCOSD will implement this project using the required BMPs. A list of the BMPs related to cultural and historic resources that are incorporated into this project can be found in Table 5. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

Table 5 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) Related to Cultural and Historical Resources Relevant to the Giacomini Trails Improvement Project

BMP/Policy	Title ⁶
HAR-1.1	Preserve Historical Resources
General -1	Limit Work Area Footprints in Sensitive Resource Areas
Cultural Resources – 1	Historical and Archeological Resource Mapping
Cultural Resources – 2	Consultation with Northwest Information Center
Cultural Resources – 3	Tribal Consultation
Cultural Resources – 4	Alteration of Historic Structures
Cultural Resources – 5	Permanent Protection
Cultural Resources – 6	Construction Discovery Protocol
Cultural Resources – 7	Human Remains
Cultural Resources - 8	Community Awareness
Policy SW.27	Protect High-Value Cultural and Historic Resources by Rerouting or Confining Visitor Access
Policy SW.28	Remove or Realign Roads and Trails Away from High-Value Cultural and Historic Resources
Marin Countywide Plan Policy	
HAR-1.1	Preserve Historical Resources
HAR-1.3	Avoid Impacts to Historical Resources
Marin County Code	
22.20.040	Archeological and Historic Resources
5.32.040	Excavating Indian Middens

Note: See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014.

b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

No Additional Analysis Required

As discussed under (V.a) above, the RTMP EIR concluded that with the implementation of the County policies and ordinances, together with the systemwide policies and BMPs included in the RTMP ensure that MCOSD will apply protective measures that will reduce impacts to archeological resources. Consistent with the RTMP, the MCOSD will implement this project using the required BMPs and policies. A list of the BMPs and policies incorporated into this project can be found in Table 5. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed

⁶ See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014

project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP could cause degradation or loss of paleontological resources or unique geologic features. However, the RTMP EIR concludes that the impact would be less than significant. Specifically, the RTMP EIR states that:

Because no paleontological resources are likely to exist within the MCOSD preserves, and all unique geological resources within preserves are already protected within permanently designated open space, the potential impact of implementing the RTMP on these resources would be less than significant.

The proposed project does not contain any protected geological resources and is within a MCOSD preserve. Therefore the proposed project is consistent with the paleontological resources and unique geologic feature analysis in the RTMP EIR, and does not require additional analysis.

d) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

No additional Analysis Required

As discussed under (V.a) above, the RTMP EIR concluded that with the implementation of the County policies and ordinances, together with the systemwide policies and BMPs included in the RTMP ensure that MCOSD will apply protective measures that will reduce impacts to human remains. Consistent with the RTMP, the MCOSD will implement this project using the required BMPs and policies. A list of the BMPs and policies incorporated into this project can be found in Table 5. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the biological resources analysis in the RTMP EIR, and does not require additional analysis.

REFERENCES

Archaeological Resource Service (ARS), 2016. *A letter providing cultural resource evaluation for trails within the Giacomini Open Space Preserve*. Addressed to James Raives, Marin County Parks, July 01.

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Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

GEOLOGY, SOILS, AND SIESMISITY

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additional Analysis Concludes Less Than Significant Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project expose people or structures to 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.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

No additional Analysis Required

The RTMP EIR concluded that a large number of earthquake faults are located within and adjacent to Marin County and the MCOSD preserves, and that several MCOSD roads or trails could cross faults, and that these MCOSD facilities could be damaged during an earthquake on the underlying faults. However, the RTMP EIR concluded that the impact would be less than significant. Specifically the RTMP EIR states:

(pg. 8-15) High intensity ground shaking during an earthquake on a local or regional fault could expose the MCOSD roads and trails to strong ground shaking, potentially leading to ground or slope failure and damage to the MCOSD facilities. Several MCOSD roads or trails could cross faults, and these MCOSD facilities could be damaged during an earthquake on underlying faults.

However, the risk to recreationists from failure or damage of the MCOSD roads and trails would be considered to be a low magnitude hazard since no occupied structures would be involved and the number and density of persons at any given time using the MCOSD facilities that could be adversely affected is low. The risk of injury or death for a substantial number of people using the MCOSD facilities during an earthquake would be much lower than for that of an urban area of Marin County.

The RTMP EIR also states that:

Proposed road or trail construction that is located in areas of moderate to very high liquefaction susceptibility, or within other areas exposed to earthquake hazards, would be preceded by a thorough, site-specific geotechnical investigation to evaluate liquefaction susceptibility and other earthquake hazards in accordance with California Geological Survey (CGS) guidelines. This would allow for proper avoidance or mitigation of these potential hazards.

Proper construction and avoidance of hazard areas for new roads or trails, and decommissioning existing facilities exposed to high risk or earthquake hazards, as regulated by the policies and BMPs evaluated in Table 8-3 would avoid or reduce the effect of seismic hazards. Thus, this impact would be less than significant and no mitigation would be necessary.

A list of the BMPs and policies incorporated into this project can be found in Table 6. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the Criterion VI.a analysis in the RTMP EIR, and does not require additional analysis.

Table 6 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) and Policies Related to Seismic and Geologic Hazards

BMP/Policy	Title
Geologic Hazards-1	Assessment and Requirements in Areas of Potential Geologic Hazard
Geologic Hazards-2	Construction in Areas of Slides and Debris Flows
Geologic Hazards-3	Construction in Areas of Erodible and Expansive Soils

BMP/Policy	Title
Geologic Hazards-4	Construction in Areas of Collapsible Soils
General-10	Requires regular inspection and maintenance of roads and trails
Water Quality – 3	Erosion Control Measures
Marin Countywide Plan – TRL-2.b	Design, Build, and Manage Trails in a Sustainable Manner
Marin Countywide Plan – TRL-2.7	Ensure Sustainable Maintenance
Marin Countywide Plan – TRL-2.3	Ensure User Safety
MCOSD Policy Review Initiative – Policy T2a	The MCOSD will use best management practices in the design, construction, and maintenance of trails.
RTMP Policy – Policy SW.19	Redundant Roads and Trails
RTMP Policy – Policy SW.20	Conversion of Existing Roads to Trails

Note: See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014b.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP could increase the potential for soil erosion and loss. However, the RTMP EIR concluded that these impacts would be less than significant. Specifically the RTMP EIR states that:

(pg. 8-28) Pursuant to state law, future road and trail construction projects implemented under the RTMP would be required to comply with existing federal, state, and county regulations designed to protect water quality that include designing for, monitoring, and installing temporary BMPs to minimize erosion. Temporary soil erosion prevention measures are enforced by the RWQCB under the NPDES program for active construction sites greater than one acre in area and under the storm water phase II permit for construction sites less than one acre. Measures include watering for dust control, treating exposed slopes and material stockpiles, and reducing runoff post construction. Soil loss would be minimized as potential runoff waters would be infiltrated on-site and/or attenuated prior to release.

Construction design standards for trails and roads set forth in the RTMP⁷ that properly manage surface water flow are intended to reduce ongoing erosion after

⁷ Please refer to Chapter 6 of the Road and Trail Management Plan for a discussion of road and trail design standards that would be implemented upon adoption of the RTMP. The majority of the identified standards are designed to control drainage from roads and trails and otherwise minimize erosion.

construction. Design standards include using siting, grading, water bars, rolling dips, outsloping, and surfacing, among other approaches, to minimize and control erosion.

Implementation of BMP General-10 would ensure ongoing oversight and evaluation of the MCOSD trail and road system. Regular inspections of roads and trails by district staff would facilitate early observation of areas with increased erosion. This can direct maintenance efforts to specific sites before problems become significant.

Additionally, the MCOSD, in evaluating existing roads and trails for decommissioning or conversion, would evaluate the level of existing erosion on the road or trail segment under review to determine whether a particular road or trail would be maintained in its existing condition, decommissioned, re-routed, re-constructed, or converted.

Because of a comprehensive body of federal, state, and county requirements, and with implementation of the policies and BMPs set forth in the RTMP that would avoid or reduce the effect of erosion hazards, this impact would be less than significant. No mitigation would be necessary.

A list of the BMPs and policies incorporated into this project can be found in Table 6. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the Criterion VI.b analysis in the RTMP EIR, and does not require additional analysis.

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

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP may lead to construction, decommissioning, or maintenance of roads and trails, or changes in use on or near areas subject to slope instabilities or landslides. However the RTMP EIR concluded that any impacts from these changes would be less than significant. Specifically the RTMP EIR states that:

(pg. 8-21) With implementation of the policies and BMPs set forth in the RTMP, the MCOSD would use avoidance tactics or engineered grading to mitigate adverse geologic conditions and potential hazards. Consultation with engineering geologists and/or geotechnical engineers would help avoid or mitigate potential hazards when identifying new trail locations or improving existing trails in areas prone to geologic hazards.

As demonstrated in Table 8-4, the MCOSD would consider potential slide and debris flow hazards when deciding whether to maintain, decommission, or

relocate an existing road or trail, and in locating and designing new roads, trails, and drainage improvements under the RTMP so as not to alter or change the shape, stability, drainage, or groundwater conditions of an existing slide area that would result in the reactivation of a previous slope failure or in destabilization of the slope.

Implementation of BMP General-10 would ensure ongoing oversight and evaluation of the MCOSD trail and road system. Regular inspections of roads and trails by district staff will facilitate early observation of areas experiencing slope instability or at risk of a landslide. This can direct maintenance efforts to specific sites and can help identify segments of roads and trails for decommissioning or relocation.

Any development of roads or trails within the vicinity of a coastal bluff would be preceded by a detailed engineering geologic and geotechnical engineering investigation in order to accurately characterize the site geologic conditions and determine the stability of the slope and bluff retreat rates. This would allow for the development and implementation of proper setback and/or mitigation recommendations by the project geotechnical engineer.

The RTMP includes policies and BMPs to ensure that the location and type of any new road or trail would be evaluated, selected, and designed to avoid or minimize any risks from slope instabilities and landslides. Therefore, this impact would be less than significant, and no mitigation would be necessary.

A list of the BMPs and policies incorporated into this project can be found in Table 6. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Additionally, the soils in the proposed project location are classified as having few landslides and very low liquefaction potential. Therefore, the proposed project is consistent with the Criterion VI.c analysis in the RTMP EIR, and does not require additional analysis.

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

No additional Analysis Required

The RTMP EIR concluded that roads and trails maintained or experiencing a change in use through implementation of the RTMP could contribute to destabilization of slopes or alteration of water flow patterns that could exacerbate creep or subsidence hazards. However these hazards would be mitigated by the policies and BMPs incorporated into the RTMP would reduce these impacts to less than significant. Specifically the RTMP EIR states that:

(pg. 8-25) As set forth in Table 8-5, the MCOSD would use avoidance tactics or engineered measures to mitigate adverse geologic conditions and potential hazards including creep and subsidence. Consultation with engineering geologists and/or geotechnical engineers would help mitigate potential hazards when

identifying new trail locations or improving existing trails in areas prone to these hazards. For areas that cannot be avoided, site-specific detailed engineering and geological analysis would be conducted to properly evaluate and mitigate the unfavorable site conditions. The MCOSD would use avoidance tactics or engineered grading to mitigate adverse geologic conditions and potential hazards. When designing for trails and infrastructure in any of the lower elevation preserves, the MCOSD would assess soil type and the potential for subsidence to determine optimum trail location and structural foundations.

Implementation of BMP General-10 would ensure ongoing oversight and evaluation of the MCOSD trail and road system. Regular inspections of roads and trails by district staff would facilitate early observation of areas with problems from creep and subsidence. This can direct maintenance efforts to specific sites and can help identify segments of roads and trails for decommissioning or relocation if they are located in areas prone to creep and subsidence.

Because the RTMP includes goals and policies to ensure that the location and type of any existing or new road or trail would be evaluated, selected and designed to avoid or minimize any risks from creep and subsidence, this impact would be less than significant. No mitigation would be necessary.

A list of the BMPs and policies incorporated into this project can be found in Table 6. With incorporation of these BMPs into the project, consistency with these policies and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Additionally, the soils located in the proposed project location are not described as having a high clay content that would result in expansiveness. Therefore, the proposed project is consistent with the Criterion VI.d analysis in the RTMP EIR, and does not require additional analysis.

- e) *Would the project 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 Additional Analysis Required

The RTMP EIR concluded that the MCOSD does not provide restrooms or other facilities within its preserves that would generate wastewater therefore there would be no impact.

The proposed project will not generate any wastewater and does not include the installation or use of any septic tanks or alternative wastewater disposal systems, therefore no additional analysis is required.

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GREENHOUSE GAS EMISSIONS

VII. GREENHOUSE GAS EMISSIONS. Would the project:	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

No additional Analysis Required

The EIR for the RTMP evaluated the plan’s impact on greenhouse gas emissions. The EIR concluded that the general scientific consensus is that global climate change is occurring and caused by increased emissions of greenhouse gases that keep the Earth’s surface warm by trapping heat in the Earth’s atmosphere. While many studies show evidence of warming over the last century and predict future global warming. The six gases that are widely seen as the principal contributors to global climate change are: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF₆). As described in the RTMP EIR, Marin County completed a greenhouse gas emissions inventory in 2003 and updated in 2007, which concluded that Marin County CO₂ equivalent emissions is approximately 3 million tons. Vehicle traffic accounts for 50 percent of the total emissions, and energy use by buildings (residential, commercial, and industrial combined) accounts for 41 percent.

The EIR for the RTMP concluded that there would be no significant measurable increase in greenhouse gas emissions with the implementation of the RTMP. The EIR describes primary greenhouse gas emissions to result from direct emissions associated with construction equipment and indirect emissions associated with visitors and employees driving to the trailheads. The impact on greenhouse gas emissions from the proposed improvements to the Fairway trails is consistent with the conclusions in the EIR. In this case, the proposed construction emissions from the proposed trail work would not result in a significant impact. As stated in the RTMP EIR:

(pg. 9-15) On-road and off-road exhaust emissions associated with construction activities are regulated by the ARB [Air Resources Board]. The ARB is responsible for developing statewide programs and strategies to reduce the emission of smog-forming pollutants, particulate matter, and toxics emitted by on and off-road mobile sources, which would also reduce GHG [greenhouse gases] emissions. The ARB has developed diesel exhaust reduction programs for both on and off-road diesel vehicles. These programs work to retrofit existing diesel engines, in addition to developing appropriate certifications standards for new

diesel engines (ARB 2012). The majority of construction GHG emissions are generated by diesel-powered equipment.

Additionally, the EIR concluded that the implementation of the RTMP would not result in significant increase in greenhouse gas emissions from indirect impacts associated with visitation to the trails. The EIR based this conclusion on the fact the purpose of the RTMP was to manage the existing system of roads and trails within the open space preserve and not to increase trail use. Any increase in trail use would be from population growth or other similar effects not associated with the proposed project. In this case, the proposed project will modify existing trails to make them suitable to be included within our system of roads and trails and to address their environmental impacts, such as reducing erosion in environmentally sensitive areas. In the end, the trails will be similar in size and use to the existing system. Additionally, trailhead parking is limited to existing on-street areas in an area that has limited capacity. The availability of parking is a significant factor that will limit traffic to the area. Therefore, the proposed project is consistent with the Criterion VII.a analysis in the RTMP EIR, and does not require additional analysis.

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

No additional Analysis Required

As discussed in the RTMP EIR, the Marin County Greenhouse Gas Reduction Plan (2006) set out policies to help achieve the County's greenhouse gas emissions targets, which include reducing GHG emissions. As concluded in the RTMP EIR, RTMP projects would not result in an increase in GHG emissions, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions. Therefore, the proposed project does not require additional analysis.

REFERENCES

Bay Area Air Quality Management District (BAAQMD), 2012. *Bay Area Air Quality District CEQA Air Quality Guidelines*, May.

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

County of Marin, 2007. *Marin Countywide Plan*, November.

HAZARDS

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporated	Additional Analysis Concludes Less Than Significant Impact
VIII. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

No Additional Analysis Required

The RTMP EIR concludes that during maintenance and construction of the project, the MCOSD will use fuel, lubricants, and other similar construction materials, which are hazardous materials. There may be potential for releases to occur during construction that could potentially affect construction workers, recreational users, and the environment. However, the RTMP EIR concludes that impacts would be less than significant.

(pg. 10-21) As shown in Table 10-5, the Marin Countywide Plan and the RTMP provide numerous goals, policies, and implementation programs intended to protect the health and safety of residents and visitors from the improper use, transport, and disposal of hazardous materials. For example, Implementing Programs PS-4.f and PS-4.g encourage county agencies, including the MCOSD,

to reduce the use of hazardous materials on county properties and to purchase non-toxic products when available. This would include the use of chemicals by the MCOSD on preserves.

In addition, implementation measures EH-1.e and PS-4.d of the Countywide Plan are intended to strengthen the training and preparation of county emergency personnel to respond to environmental emergencies such as wildfires and accidental spills of hazardous materials.

Best management practices proposed within the RTMP would further limit the release of construction chemicals to the environment and would minimize the effects of any accidental releases that could occur.

Although the risk of the accidental release of hazardous materials into the environment would remain, the RTMP and Marin Countywide Plan include many goals, policies, and implementation measures to substantially reduce and manage that risk. Therefore, implementation of the RTMP would not create a reasonably foreseeable increase in risk. This would be a less-than-significant impact and no mitigation would be required.

Table 7 RTMP BMPs Related to Public Health and Safety

BMP	Title
Hazardous Materials	
General-6	Prevent or Reduce Potential for Pollution
Water Quality-1	Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas
Water Quality-4	Preventing or Reducing the Potential for Pollution
Construction Contracts 1	Standard Procedures in Construction Contracts
Construction Contracts-1	Equip all vehicles with a suitable fire extinguisher.

Note: See Appendix A for full text of BMPs listed in this table. Source: MCOSD, 2014.

A list of the BMPs incorporated into this project can be found in Table 7. With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the Criterion VI.d analysis in the RTMP EIR, and does not require additional analysis.

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

No Additional Analysis Required

See the discussion in VII.a above

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Additional Analysis Required

The RTMP concluded that no existing or proposed schools exist within ¼ mile of the Gary Giacomini Preserve. This was confirmed via a search of Marin County GIS data on June 30, 2016. No additional analysis is required.

- d) *Would the project 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?*

No additional Analysis Required

As described in the RTMP EIR, no identified active Cortese List (Government Code Section 65962.5) site is located within an MCOSD open space preserve. Therefore, no additional analysis is required.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

No additional Analysis Required

As described in the RTMP EIR, only three of the preserves are located near airfields, but nothing about the proposed project would change airport operations or air travel at any of these facilities, nor would it result in any changes to where people live or work. Therefore, the proposed project would not change the exposure of people living or working near one of these fields, and there would be no impact. Additionally, Gary Giacomini Preserve is not located within an airport land use plan or within 2 miles of a public airport or public use airport. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- f) *For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

No additional Analysis Required

See discussion in VIII.e above.

- g) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP would not adversely affect emergency access and that any impact would be less than significant. The RTMP EIR concluded that the RTMP includes policies that are intended to maintain emergency access. These policies are listed

in Table 8 below. The proposed project is consistent with these policies and the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

Table 8 RTMP Policies Related to Emergency Access

Policy	Title
Policy SW.19	Redundant Roads and Trails
Policy SW.20	Conversion of System Roads to Trails
Policy SW.21	Roads and Trails Serving Nonrecreational Uses

- h) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP could expose people or structures to wildland fires. Because existing county policies and proposed policies in the RTMP would result in no increased wildland fire risk, this impact would be less than significant. Specifically, the RTMP EIR states that:

(pg. 10-29) The RTMP includes some activities, including the use of small mechanical tools during maintenance activities and the use of construction equipment during large construction activities that could cause accidental wildland fires. As shown in Table 10-6, the Marin Countywide Plan, the MCOSD, and the RTMP provide numerous goals, policies, and implementation measures intended to minimize the likelihood of wildland fires and to protect people and property on adjacent parcels from harm due to wildland fires on the MCOSD open space preserves. The MCOSD Policy F-2 directs staff to conduct fuels reduction activities on open space preserves and Policy F-5 directs the MCOSD to coordinate with Marin County Fire, local fire agencies, and communities to establish priorities for fuel reduction activities. Policies F-7 and F-8 commit the MCOSD to work with adjacent landowners, Marin County Fire, local fire agencies, and communities to reduce fire fuel loads on parcels adjacent to preserves.

RTMP Systemwide Policies SW.19, SW.20, and SW.21 would require consultation with fire agencies to ensure that necessary emergency access is retained throughout open space preserves for use in firefighting. Policy SW.26 permits the MCOSD to temporarily or permanently close preserves or restrict uses in preserves, including construction and/or maintenance, to reduce fire risk or during periods of high fire danger. In addition, RTMP best management measure Construction Contracts-1 requires that all construction contracts be written to require the installation of fire extinguishers on all construction vehicles

to allow the construction contractor to fight any wildland fires created by construction activities.

Although the implementation of the RTMP would not eliminate the existing risk of wildland fires, it includes many policies to reduce the current risk, and activities conducted under the RTMP would not create a reasonably foreseeable increase in risk. Existing fire access would be maintained, and implementation of the RTMP would not interfere with any existing or future fire prevention activities. For these reasons, this would be a less-than-significant impact and no mitigation would be required.

Although operation of the project would not introduce new ignition sources to the site, construction and maintenance equipment could generate sparks and would temporarily increase fire risk. The RTMP contains policies and BMPs to reduce wildfire risk. RTMP Systemwide Policy SW.26 allows the MCOSD to temporarily or permanently close preserves or restrict uses in preserves to reduce fire risk during periods of high fire danger. In addition, BMP Construction Contracts-1 requires the installation of fire extinguishers on all construction vehicles to allow the construction contractor to extinguish small fires ignited by construction activities before a problem develops.

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the Criterion VIII.h analysis in the RTMP EIR, and does not require additional analysis.

REFERENCES

California Department of Forestry and Fire Protection (CALFIRE), 2007. Fire Hazard Severity Zones in SRA, Marin County, adopted November 7.

California Department of Toxic Substances Control (DTSC), 2015. Envirostor environmental database. Website: <http://envirostor.dtsc.ca.gov/>, accessed April 15.

California State Water Resources Control Board (SWRCB), 2015. Geotracker environmental database. Website: <http://geotracker.waterboards.ca.gov/>, accessed April 15.

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

HYDROLOGY AND WATER QUALITY

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additional Analysis Concludes Less Than Significant Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding of as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project violate any water quality standards or waste discharge requirements?*

No Additional Analysis

The RTMP EIR concludes that construction activities associated with decommissioning and improving roads and trails can create temporary disturbance and serve as a sediment source. However, one of the primary objectives of the RTMP is to reduce the environmental impact of roads and trails on sensitive resources, habitats, riparian areas, native and special status plant and animal species, and that the long-term effect of implementation of the RTMP would be to improve water

quality over existing conditions. The RTMP EIR also concludes that construction and maintenance activities on existing roads and trails have the potential to result in erosion; these activities could result in the release of chemicals, principally fuels, to the environment. Sediments and other pollutants could adversely affect water quality. However, the RTMP EIR also concludes that this impact would be less than significant on a programmatic level due to the policies and BMPs included in the RTMP, in addition to compliance with existing NPDES and other water quality regulations.

The proposed project does not meet any of the requirements for obtaining permits from any regulatory body related to water quality as it does not propose any fill, discharge or disturbance of any regulated water body. Consistent with the RTMP, the proposed project incorporates the BMPs listed in Table 9.

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the impacts analyzed in the RTMP EIR, and does not require additional analysis.

Table 9 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) Related to Water Quality

BMP	General Description
General-1	Limit Work Area Footprints in Sensitive Resource Areas
General-2	Modify Construction-Related Vegetation Management Methods in and near Wetlands, Riparian Vegetation
General-3	Minimizing potential for erosion (including limiting work area footprint in sensitive resource areas)
General-4	Control Food-Related Trash
General-6	Preventing or reducing potential for pollution
General-7	Including standard procedures (including Storm Water Pollution Prevention Plans and erosion control provisions) in construction contracts
General-10	Road and trail inspections
Water Quality-1	Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas
Water Quality-2	Temporary erosion and sediment control
Water Quality-3	Erosion control measures
Water Quality-4	Preventing or Reducing the Potential for Pollution
Water Quality-5	Road and trail inspections (to protection water quality or other resources)
Water Quality-6	Grading windows
Water Quality-7	Culvert inspection
Water Quality-8	Proper disposal of excess materials
Water Quality-9	Sidcasting Construction Material

Note: See Appendix A for full text of BMPs listed in this table. Source: Marin County Open Space District (MCOSD), 2014.

- b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP would not result in the use of groundwater or interfere with groundwater recharge and that this impact would be less than significant. The RTMP EIR notes that due to the RTMP's net environmental benefit policy, there would be no net increase in the environmental footprint of roads and trails with implementation of the RTMP. The RTMP EIR also states that:

(pg. 11-84) Additionally, roads and trails within MCOSD preserves typically maintain a natural surface composed of the rock and soil materials. Hardened surface road and trail facilities would be constructed only to protect environmental resources by minimizing the potential for erosion or to maintain fish passage at stream crossings.

The proposed project will make drainage improvements and adopt existing trails, and decommission others, therefore it is consistent with the analysis of impacts in the RTMP EIR, and does not require additional analysis.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

No Additional Analysis Required

The RTMP EIR concludes that future maintenance or construction activities, changes in use, with implementation of the RTMP, could alter waterways within MCOSD preserves and provide an ongoing source of erosion and sedimentation of water bodies. However the RTMP EIR concludes this impact would be less than significant. Specifically the RTMP EIR states that:

(pg. 11-80) The policies, procedures, standards, and BMPs contained in the RTMP as set forth in Tables 11-7 through 11-10 would manage maintenance and construction activities, and result in the improvement, decommissioning, re-routing, or reconstruction of improperly designed or located facilities to reduce erosion and sediment generation. For these reasons, this would be a less-than-significant impact.

The BMPs from the RTMP related to water quality that are incorporated into the proposed project are listed in Table 9. With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the impacts analyzed in the RTMP EIR, and does not require additional analysis.

- d) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP could limit infiltration and increase runoff volumes and peak flows with impervious surfaces such as roadways, trails or parking areas with hardened gravel or asphalt surfacing. However, the RTMP EIR concludes that this impact would be less than significant. Specifically the RTMP EIR states that:

(pg. 11-83) Hardened surface treatments may be used on heavily used road and trail segments to prevent erosion. The RTMP proposes road aggregate surfacing, permeable paving, or a functional equivalent in these locations. Use of permeable paving will minimize runoff problems from newly paved roads and trails. When paired with drainage controls and conveyances, the project will manage runoff and prevent negative downstream impacts. Runoff from paved roadways will be conveyed with lined ditches, vegetated swales, or subdrains. Ditches and swales allow for attenuation and infiltration of stormwater runoff, minimizing downstream impacts. Because implementation of the RTMP would not result in increased runoff volumes or peak flows, a less-than-significant impact would result.

The proposed project does not include any hardened surfacing and seeks to reduce runoff by converting portions of road to trail, and is adding drainage features along existing trail to increase the frequency of dewatering thereby increasing the amount of infiltration. In addition, the proposed project incorporates the BMPs related to water quality listed in Table 9.

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project is consistent with the Criterion IX.d analysis in the RTMP EIR, and does not require additional analysis.

- e) *Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

No Additional Analysis Required

See the discussion in IX.d above for the analysis of impacts associated with Criterion IX.e in the RTMP EIR. The proposed project does not include any hardened surfacing and seeks to reduce runoff by converting portions of road to trail, and is adding drainage features along existing trail to increase the frequency of dewatering thereby increasing the amount of infiltration. In addition, the proposed project incorporates the BMPs related to water quality listed in Table 9.

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that

described in the RTMP EIR. Therefore, the proposed project is consistent with the impacts analyzed in the RTMP EIR, and does not require additional analysis.

f) *Would the project otherwise substantially degrade water quality?*

No Additional Analysis Required

See the discussion in IX.a above for an analysis of impacts to water quality. The proposed project is consistent with the analysis in the RTMP EIR and does not require additional analysis.

g) *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No Additional Analysis Required

As concluded in the RTMP EIR the MCOSD does not provide housing within its preserves that could be exposed to floodwaters and would not construct residences as part of the proposed project. Therefore, there would be no impact and no additional analysis is required.

h) *Would the project place, within a 100-year flood hazard area, structures that would impede or redirect flood flows?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP would not increase flood levels or flood risk to people or structures. In flood prone areas within district properties, users could be exposed to flooding if they are using certain facilities during flood events. However the RTMP EIR concluded this impact would be less than significant. Specifically the RTMP EIR states that:

(pg. 11-85) Proposed RTMP Policy SW.31, Floodplain Policy for New and Improved Roads and Trails addresses flooding:

Floodplain Policy for New and Improved Roads and Trails. The MCOSD will review current Federal Emergency Management Agency Flood Insurance Rate Maps and other current flood maps to assess potential flood impacts to any proposed new or improved road, trail, or associated facilities located in the lower elevation bayland or coastal areas (i.e., Santa Margarita Island, Santa Venetia Marsh, Bothin Marsh, Rush Creek, Deer Island, and Bolinas Lagoon). In cases where a flood risk is identified, proposed facilities shall either be relocated outside of the flood prone area or designed and constructed in a manner to protect public safety and not increase base flood elevations. As part of public safety, the MCOSD shall also review the most current Tsunami Inundation Maps as part of the trail improvement planning efforts in those areas in order to identify areas that may require escape plans or proper notification.

Implementation of this policy would avoid construction of facilities within flood prone areas and would protect visitor safety by constructing roads and trails to be outside flood zones. Additionally, many of the actions under the RTMP would help

to alleviate localized flooding by eliminating and properly designing for stream and drainage crossings, and minimizing the extent of trail disturbance. For the current preserves in the 100-year floodplain, any new trail or facility construction proposed in those areas would be required to demonstrate there would be no increase in flood elevation by one foot or more.

This measure would protect the public from flood. Because implementation of the RTMP would not unnecessarily result in the exposure of people or structures to the risks of flooding after mitigation, a less-than-significant impact would result.

The project is not located within a 100-year flood hazard zone (FEMA, 2016). Therefore the proposed project is consistent with the impacts analyzed in the RTMP EIR and does not require additional analysis.

- i) *Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding of as a result of the failure of a levee or dam?*

No Additional Analysis Required

See the discussion in IX.h above for an analysis of impacts associated with flooding including exposure of people or structures to risk of loss injury or death. The project site is not subject to flooding due to dam inundation (Nichols-Berman, 2005).

Therefore the proposed project is consistent with the impacts analyzed in the RTMP EIR and does not require additional analysis.

- j) *Would the project expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunامي, or mudflow?*

No Additional Analysis Required

See the discussion in IX.h above for an analysis of impacts associated with flooding including exposure of people or structures to risk of loss injury or death involving inundation by seiche, tsunami, or mudflow. The proposed project is not located within any tsunami inundation area according to the most recent Tsunami Inundation Map provided by the California Geological Survey. Therefore the proposed project is consistent with the impacts analyzed in the RTMP EIR and does not require additional analysis.

REFERENCES

Federal Emergency Management Agency (FEMA), 2016. Flood Insurance Rate Map, Marin County California, Map Number 06041C0466F, Effective March 16.

Gold Ridge Resource Conservation District (RCD). 2016. *Giacomini Trails Scoping Project, Gary Giacomini Open Space Preserve*. May.

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

State of California Geological Survey, 2016. Tsunami Inundation Map, Bolinas Quadrangle.
Website:http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Marin/Documents/Tsunami_Inundation_Bolinas_Quad_Marin.pdf, accessed June 29.

Nichols-Berman, 2005. *Marin Countywide Plan Flooding Technical Background Report*, updated November.

LAND USE AND PLANNING

		No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additional Analysis Conclude s Less Than Significa nt Impact
X.	LAND USE AND PLANNING. Would the project:				
a)	Physically divide an established community?				
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project physically divide an established community?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP will not result in division of an established community and therefore there would be no impact and no mitigation would be required. Specifically the RTMP EIR states that:

(pg. 14-10) There are no residences or neighborhoods within the preserves. There are 1,671 residences located adjacent to preserve boundaries. Because there are no residences or established communities within the preserves, and the RTMP would have no effect on adjacent land uses, implementation of the proposed RTMP would not physically divide an established community. There would be no impact, and no mitigation would be required.

The proposed project is consistent with the impacts analyzed in the RTMP EIR and does not require additional analysis.

b) *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP would result in less than significant impacts as a result of conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Specifically, the RTMP EIR states that:

(pg. 14-10) The RTMP would not modify the land use designations of any preserve lands, so land uses on all preserves would remain consistent with the

general plan goals and policies to protect and enhance open space, adopted by Marin County and the cities that include lands on preserves. Implementation of the RTMP would increase resource protection within the open space preserves, and thereby enhance existing open space values. (See the evaluation of the no-project alternative in Chapter 15, Alternatives Analysis, of this RD TPEIR for an evaluation of this increase in environmental protections compared to existing practices.)

Because the proposed RTMP would result in increased protection of open space values and would not conflict with any adopted county or city policies with respect to environmental protection, the RTMP project would be consistent with land use plans. This would be a less-than-significant impact and no mitigation would be required.

The proposed project would result in increased protection of open space values by reducing sedimentation of waterways and restoring habitat along environmentally damaging unsanctioned trails. The proposed project is consistent with the analysis in the RTMP EIR and therefore does not require additional analysis.

- c) *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Additional Analysis Required

The RTMP EIR concludes that the project area of the RTMP does not include any approved habitat conservation plan, or other approved local, regional or state habitat conservation plan and therefore no significant impact would result and no mitigation would be required. The proposed project is consistent with the analysis of impacts in the RTMP EIR and therefore does not require additional analysis.

REFERENCES

County of Marin, 2007. Marin Countywide Plan, November.

MINERAL RESOURCES

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additio nal Analysi s Conclud es Less Than Signific ant Impact
XI. MINERAL RESOURCES. Would the project:				
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project 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?*

No Additional Analysis Required

The RTMP EIR concluded that no known mineral resources are located at the project site. The only mineral resources within lands of the MCOSD are on Ring Mountain and at Mt. Burdell Open Space Preserve (MCOSD, 2014a). Therefore, the analysis of impacts in the RTMP EIR is consistent with the proposed project therefore no additional analysis is required.

b) *Would the project 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?*

No Additional Analysis Required

Refer to (a) above.

REFERENCES

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

NOISE

		No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
XII.	NOISE. Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b)	Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

No Additional Analysis Required

As addressed in the RTMP EIR, major noise-generating construction and maintenance activities are from the use of heavy equipment for grading and excavation, such as that required for the proposed trail upgrade. Construction equipment would include a small trail dozer, known as a “SWECO,” mini excavator, and hand-held powered tools. During ground clearing activities, noise levels could reach 84 decibels on the A-weighted scale (dBA), and 89 dBA during trail work. The trail work will be within the interior of the preserve well away from private property.

The RTMP EIR concluded that all construction and maintenance activity associated with the implementation of the RTMP would meet Marin County noise standards and that with the incorporation of the policies and BMPs identified in the RTMP, impacts from exposure of persons to or generation of noise levels in excess of established standards or ordinances would be less than significant.

Consistent with the RTMP, the proposed project incorporates the BMPs listed in Table 10.

With incorporation of these BMPs into the project and the low-impact nature of the proposal, the improvements to the network of trails at the Giacomini Preserve will result in similar impacts to that

described in the RTMP EIR. Therefore, the proposed project is consistent with the impacts analyzed in the RTMP EIR, and does not require additional analysis.

Table 10 Road and Trail Management Plan (RTMP) Best Management Practices (BMPs) and Policies Related to Noise

BMP	Title
General-1	Limit Work Area Footprints in Sensitive Resource Areas
Invasive -4	Limited Soil Disturbance
Construction Contracts - 1	Standard Procedures in Construction Contracts
Noise – 1	County Noise Ordinance Requirements
Noise – 2	Noise Control during Construction within and Adjacent to Sensitive Wildlife Populations
Countywide Plan Policies	
NO-1.2	Minimize Transportation Noise
NO-1.3	Regulate Noise Generating Activities
Implementing Program NO-1.i	Regulate Noise Sources; and Marin County Ordinance 3431
NO-1.k	Minimize Noise Impacts from Temporary Land Uses

Note: See Appendix A for full text of BMPs listed in this table. Source: Marin County Open Space District (MCOSD), 2014.

b) *Would the project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*

No Additional Analysis Required

The RTMP EIR concluded that impacts from implementation of the RTMP associated with exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels would be less than significant. Specifically the RTMP EIR States that:

(pg. 12-18) Implementation of the RTMP could result in maintenance and construction activities that could generate groundborne vibration or noise in the vicinity of work areas. Because all activities initiated under the RTMP would meet Marin County construction noise standards, would be infrequent and temporary at any one location, and would mostly occur in remote locations well removed from any surrounding sensitive land uses, this impact would be less than significant.

(pg. 12-18) As described above, implementation of the RTMP would involve construction activities associated with road and trail maintenance, the re-routing and de-commissioning of existing roads and trails, and the construction of new roads and trails, that could generate short-term, temporary groundborne noise or vibration. Some of these construction activities may involve the use of heavy construction equipment, including excavators, dozers, skip loaders, and mowers. To date, the MCOSD construction and maintenance activities have not included

high vibration activities such as pile driving or blasting. Construction and maintenance activities would continue to be periodic and temporary, and in most cases would not be adjacent to inhabited areas, so any vibrational effects would be attenuated by distance before reaching sensitive receptors. Further, the RTMP BMP Noise-1 would minimize any potential vibration effects during evening, night, or holiday periods. In addition, the RTMP includes implementation measures that commit the MCOSD to comply with Marin County Ordinance 3431 to minimize the noise impacts of construction activities on adjacent sensitive groups. For these reasons, implementation of the RTMP would not expose persons to adverse levels of groundborne vibration or noise. This impact is considered less than significant and no mitigation would be required.

The use of heavy equipment for grading at the project site could nonetheless result in short-term, temporary groundborne noise or vibration. However, the project would comply with BMP Noise-1, which imposes the construction noise restrictions of the Marin County Code. The construction noise and vibration impact on nearby residences would be less than significant. Therefore the proposed project is consistent with the impacts analyzed in the RTMP EIR and no additional analysis is required.

- c) *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP may result in increasing exposure to noise from preserve users for some neighbors and decreasing noise exposure to others. However the RTMP EIR concluded that neither permanent nor temporary increases in noise levels that would exceed local standards, or result in an adverse impact would occur and that the impact mechanism would be less than significant. Specifically the RTMP EIR states that:

(pg. 12-17) Implementation of the RTMP would not substantially increase overall visitation to preserves. However, it would change the prioritization of projects, so it could result in some projects being constructed that would not otherwise have been constructed. It could lead to the creation of new roads and trails (including new trail access points), or the rerouting of existing trails in areas containing noise-sensitive land uses. On the other hand, it could lead to the decommissioning of roads and trails or the re-routing of facilities away from other sensitive land uses. Additionally, implementation of the RTMP could result in changes in the types of recreational uses that occur at any given location. All of these actions could change use patterns at individual preserves. Thus, the RTMP may result in increasing exposure to noise from preserve users for some neighbors and decreasing noise exposure to others.

Marin Countywide Plan Policy NO-1.2 requires that transportation noise be kept within acceptable levels in open space areas. The MCOSD Code prohibits anyone from creating “any loud, unnecessary or unusual noise which disturbs the peace and quiet...” RTMP Policy Review Initiative Policy T1g prohibits the use of recreational motorized vehicles within preserves. For these reasons, neither

permanent nor temporary increases in noise levels that would exceed local standards, or result in an adverse impact would occur. This impact mechanism would be less than significant and no mitigation would be required.

The proposed project is consistent with the impacts analyzed in the RTMP EIR and therefore does not require additional analysis.

- d) *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

No additional Analysis Required

As discussed in XII.a and XII.c above, the RTMP EIR concluded that all construction and maintenance activity associated with the implementation of the RTMP would meet Marin County noise standards and that with the incorporation of the policies and BMPs identified in the RTMP, impacts from exposure of persons to or generation of noise levels in excess of established standards or ordinances would be less than significant. The analysis of impacts in the RTMP EIR is consistent with the proposed project therefore no additional analysis is required.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP would neither increase the number of people living or working on preserves nor influence the frequency of flight paths of air traffic and therefore the RTMP would be less than significant. The proposed project is consistent with this analysis of impacts therefore the proposed project would not change the exposure of people living or working near airfields and no additional analysis is required.

- f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Additional Analysis Required

As discussed in XII.e above, the project is not located within the vicinity of a private airstrip. Therefore, the project would not expose people to excessive noise from aircraft activity. The analysis of impacts in the RTMP EIR is consistent with the proposed project therefore no additional analysis is required.

REFERENCES

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

POPULATION AND HOUSING

	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additio nal Analysi s Conclud es Less Than Signific ant Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial 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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project induce substantial 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)?*

No Additional Analysis Required

The RTMP EIR concluded that the impact of growth inducement from implementation of the RTMP would be less than significant and no mitigation would be required. Specifically the RTMP EIR states that:

(pg. 14-13) Implementation of the proposed RTMP would result in the continuing maintenance of existing roads and trails, and the potential development of new recreational roads and trails. Implementation of the RTMP would not result in the construction of any new residences or employment-generating land uses. No existing infrastructure or roads within or adjacent to the preserves would be affected. No modification to the open space uses of the preserves would occur with implementation of the RTMP, nor would the RTMP modify any general plan land use or zoning designations that would permit developed or urban uses within or adjacent to the preserves. Implementation of the RTMP would not result in the need for a substantial number of new workers. Therefore, the proposed RTMP would not induce substantial growth in Marin County. The impact of growth inducement would be less than significant and no mitigation would be required.

The proposed project would modify existing trails to bring them up to current standards and would not increase the capacity of the trails in this area. Thus, this project would not have any impact on population growth in the area. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 14-14) There are no occupied housing units within the MCOSD preserves. Therefore, neither housing units nor people would be displaced with implementation of the RTMP, so no replacement housing would be required. There would be no impact and no mitigation would be necessary.

The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Additional Analysis Required

As discussed in XIII.b above, the RTMP EIR concluded there are no occupied housing units within the MCOSD preserves therefore implementation of the RTMP does not necessitate the construction of replacement housing therefore there would be no impact and no mitigation would be necessary. The proposed project is consistent with the analysis of impacts in the RTMP EIR therefore no additional analysis is required.

PUBLIC SERVICES

		No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
XIV.	PUBLIC SERVICES.				
a)	Would the project 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:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fire protection?				
	Police protection?				
	Schools?				
	Parks?				
	Other public facilities?				

a) *Would the project 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: Fire protection, police protection, schools, parks, other public facilities?*

No Additional Analysis Required

The RTMP EIR concluded that no new public facilities for emergency services would need to be constructed to serve uses regulated by the RTMP and that this would be a less than significant impact and no mitigation would be needed. Specifically the RTMP EIR states that:

(pg. 14-15) Except for public services provided by the MCOSD itself, the only public services provided to the MCOSD preserves are emergency response services. Implementation of the RTMP would not result in the construction of new housing or other urban uses within the preserves or result in any other action that would require the provision of non-emergency public services. Because the RTMP would maintain existing emergency access to preserves, it would not interfere with emergency access (see Chapter 13 Transportation and Traffic, of this Recirculated Draft TPEIR for a more detailed evaluation of effects on emergency access). The RTMP is not designed to increase visitation and any increase in use would likely be the result of population growth and changes in the popularity of recreational activities. However, it is possible that the enhancements to the roads and trails system could result in minor increases in overall use. Because there would be no measurable increment of increase in systemwide use

due to the implementation of the RTMP, no aspect of its implementation would lead to increases in service demands.

No new public facilities for emergency services would need to be constructed to serve uses regulated by the RTMP. This would be a less-than-significant impact and no mitigation would be needed. (For an evaluation of wildland fire hazards, please see Chapter 10, Hazards and Hazardous Materials, of this RD TPEIR.)

The project would not generate the need for new or altered fire, police, school, park, library, or other public facilities. The existing emergency response personnel would serve the site, and the project would not increase emergency response demands. The proposed project is consistent with the analysis of impacts in the RTMP EIR therefore no additional analysis is required.

RECREATION

		No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
XV.	RECREATION.				
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?*

No Additional Analysis Required

The RTMP EIR concluded impacts associated with increase in use of existing neighborhood and regional parks or other recreational facilities would be less than significant. Specifically the RTMP EIR states that:

(pg. 14-17) Implementation of the proposed RTMP could result in displacement of some trail use within the MCOSD preserves. The closure and decommissioning of some roads and trails, the rerouting of others, and the construction of new routes could lead to decreases in the use of some trails (and preserves) and an increase in use at others. Additionally, the RTMP may lead to a shift of use to or from other regional parks and recreation areas. Potential displacement is not expected to be substantial in relation to the number of available trails, and because the amount of increased use is expected to be small. In addition, the RTMP contains road and trail management policies to prioritize the maintenance and to encourage the enhancement of roads and trails, which will improve the recreational value of these facilities. Because there is a large number of MCOSD policies and practices that will allow the construction of new trails, the decommissioning of some trails

as a result of the RTMP will not result in a substantial number of users to non-MCOSD roads and trails⁸.

The MCOSD preserves do not provide developed recreation activities such as playfields, courts, or picnic facilities and there would be no displacement of these uses to adjacent neighborhood parks. For these reasons, the RTMP is not likely to increase use of other parks and open space areas, and therefore, it would a less-than-significant impact.

Further in the analysis, RTMP EIR concludes that:

(pg. 14-19) Some possible locations operated by the National Park Service and the California Department of Parks and Recreation to which displaced trail users could go include: China Camp State Park, Mt. Tamalpais State Park, Samuel P. Taylor State Park, Golden Gate National Recreation Area - Marin Headlands, and Point Reyes National Seashore. Displaced users could also use watershed lands managed by the Marin Municipal Water District (MMWD), which has 73 miles of unpaved trails, and shares a common border with much of the MCOSD Region 2.

Moreover, if displacement does occur, it would not likely be of such a magnitude as to cause physical deterioration of other nearby parks and open space areas. A review of existing resource management plans for other nearby regional parks and recreation areas indicates that all recreation areas have policies, rules, and regulations that protect physical and biological resources associated with trails (MMWD 2005; Mid-Peninsula Regional OSD 2011; U.S. National Park Service 2011/2012/2013/Undated; California State Dept. of Parks and Recreation 1979a/1979b).

For these reasons, impacts related to the physical deterioration of both MCOSD and non-MCOSD recreational facilities would be less than significant and no mitigation would be necessary.

As described the proposed project includes installing drainage improvements along segments of existing trails, and decommissioning of existing unsanctioned trails. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- 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?*

No Additional Analysis Required

⁸ The potential impacts of recreation activities on designated roads and trails within the MCOSD preserves are evaluated in Chapters 5 through 13 of this RD TPEIR. See Chapter 4 regarding the EIR's approach to this analysis. All potential environmental impacts that could occur during operation of the RTMP, including those occurring from road and trail use were determined to be less than significant in Chapters 5 – 13. Please refer to those chapters for additional information regarding specific environmental topics.

The RTMP EIR concludes that implementation of the RTMP could result in adverse environmental effects. However the RTMP EIR concludes that because the RTMP includes a process intended to prioritize system maintenance and improvement projects to reduce the environmental effects caused by operation of road and trail facilities, this impact would be less than significant.

The proposed project to reduce sedimentation and restore habitat is consistent with the impacts analyzed in the RTMP EIR, therefore no additional analysis is required.

TRANSPORTATION AND TRAFFIC

XVI. TRANSPORTATION/TRAFFIC. Would the project:	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additional Analysis Concludes Less Than Significant Impact
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP would not result in conflicts with or obstructions to the implementation of adopted Marin County and MCOSD transportation and parking policies and that this impact would be less than significant. The RTMP EIR concludes that with the incorporation of Marin Countywide Plan and MCOSD Policy Review Initiative Policies related to Transportation and Traffic, implementation of the RTMP would be consistent with all relevant plans, ordinances, and policies and would implement additional Special Use policies to further reduce potential adverse parking effects.

The proposed project incorporates the policies identified in the RTMP including the policies of the Marin Countywide Plan and the MCOSD Policy Review initiative. Thus, the project would not conflict with any applicable plans, ordinances, or policies related to the circulation system, and are consistent with the impacts analyzed in the RTMP EIR, therefore no additional analysis is required.

- b) *Would the project conflict with an applicable congestion management program, including, but not limited to, level of service standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

No Additional Analysis Required

The RTMP EIR concludes that with the opening of new roads and trails and decommissioning of existing roads and trails could lead to a redistribution of travel, with more travel to some areas of the MCOSD preserves and less travel to others. However, the RTMP EIR concludes that:

(pg. 13-19) However, these changes would likely be small, and would not occur during peak commute periods. Also, according to user census information gathered by the MCOSD, trips to open space preserves are more frequently by alternative transportation mode than average Marin County work trips (the preponderance of peak hour travel). Therefore, the RTMP would not have a measurable effect on the congestion of Marin County highways and roadways, and it would be consistent with the Marin Congestion Management Program. This impact would be less than significant and no mitigation would be required.

Some increased use in the proposed project is likely because the project will upgrade existing unsanctioned trails into a shared use system trail bringing in visitors that currently do not want to use the existing trails, because of substandard condition or people who do not want to use illegal trails. Additionally, designating this network of unsanctioned trails as “system trails” and adding them to the official MCOSD maps, may also increase use. However, these changes in use would likely be small due to limitations of parking in the adjacent neighborhoods and this trail network is not a destination that brings a significant number of visitors from outside the immediate community. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- c) *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

No Additional Analysis Required

The RTMP EIR concluded that there may be a very small number of visitors who travel to Marin County by airplane and that implementation of the RTMP may change which trail they use, but it would not create any additional travel by out-of-region travelers, nor would it change patterns of air travel, therefore this impact would be less than significant. The proposed project is consistent with the analysis of impacts in the RTMP EIR therefore no additional analysis is required.

- d) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Additional Analysis Required

The RTMP EIR concludes that:

(pg. 13-15) The RTMP does not include any actions to redesign or modify any public roads or intersections, and it would not change the use of any roadways by agricultural equipment. The policies of the RTMP would not encourage or place additional cycle, pedestrian, or equestrian traffic on major roadways. For these reasons, implementation of the RTMP would not substantially increase safety hazards on roadways within Marin County. This would be a less-than-significant impact.

The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

e) *Would the project result in inadequate emergency access?*

No Additional Analysis Required

The RTMP EIR concludes that implementation of the RTMP would not adversely affect emergency access within Marin County and that this impact would be less than significant.

Emergency access to the proposed project trails is available from the end of Sinaloa Avenue, Candelerio Avenue, and Manzanita Ave in Marin County. The existing trails are too narrow to allow access for emergency vehicles. However, the project will improve access for rangers and emergency responders on foot or using all-terrain vehicles. Additionally, these trails connect to the San Geronimo Ridge Road, which provides access to the various trailheads associated with this project. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

f) *Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

No Additional Analysis Required

The RTMP EIR concluded that implementation of the RTMP would not conflict with adopted plans, programs, or policies encouraging alternative modes of transportation and that this would be a less than significant impact. Specifically the RTMP EIR states that:

(pg. 13-21) The Marin Countywide Plan and the Marin Congestion Management Program contain policies to encourage non-vehicle modes of travel. These policies focus on the provision of facilities and services for public transit, bicycles, and pedestrians in urban areas, and are, therefore, not directly relevant to the RTMP. Additionally, the MCOSD has adopted several policies, as set forth in Table 13-4, to encourage recreationists to use alternative modes of travel, and the RTMP would be consistent with this policy. Similarly, policies contained in the Bicycle and Pedestrian Master Plan pertain only to the biking and walking as modes of transportation, not recreation, and focus on urban areas.

Implementation of the RTMP would be consistent with relevant policies, plans, and programs of Marin County and the Congestion Management Agency to encourage alternative transportation modes. Additionally, the MCOSD has

adopted policies to encourage alternative modes of transportation for people traveling to preserves. For these reasons, this impact would be less than significant, and no mitigation would be required.

The Marin Countywide Plan and Marin County's Congestion Management Program contain policies to encourage non-vehicle modes of travel, as addressed in the Program EIR on the RTMP. The proposed project would be consistent with these policies of applicable documents. Additionally, the project is an implementation of the RTMP, which also encourages pedestrian and bicycle modes of travel. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

REFERENCES

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

UTILITIES AND SERVICE SYSTEMS

		No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
XVII.	UTILITIES AND SERVICE SYSTEMS. Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Comply with federal, State, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 14-22) No wastewater collection or treatment services are provided to the MCOSD open space preserves, and since the preserves consist solely of undeveloped open space, there is no existing demand for such services. The RTMP would not create a need for the provision of wastewater treatment services on preserves or lead to increases in service demands for wastewater collection and treatment outside of the preserves. Therefore, the RTMP would have no impacts associated with wastewater collection or treatment and no mitigation would be required.

The project would not entail any wastewater treatment requirements. The proposed trail would be located within an existing preserve that does not include restroom facilities. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Additional Analysis Required

Refer to (a) above for the conclusion of impacts in the RTMP EIR.

As stated above, the project would not result in any increases in wastewater treatment requirements. During construction, the MCOSD will need some minor amounts of water, which it will bring to the site as needed. If available, the MCOSD would use recycled wastewater. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

- c) *Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 14-22) No developed urban stormwater utilities are located within MCOSD preserves, and no developed urban utilities would be necessary to serve roads and trails. Because implementation of the RTMP would not result in an increase in impermeable surfaces, the RTMP would not lead to an overall increase in stormwater generation. The RTMP also includes policies, BMPs, and standards to reduce and improve stormwater management through improvements to roads and trails and possible modifications to existing storm drainage facilities. Therefore, the RTMP would have a beneficial effect on stormwater drainage and no mitigation is required. (For additional evaluation of stormwater generation and quality, please refer to Chapter 11, Hydrology and Water Quality, of this RD TPEIR.)

The proposed project will fix drainage and erosion issues on the existing trails and will not require new stormwater drainage facilities. The proposed project is consistent with the impacts analyzed in the RTMP EIR.

- d) *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 14-22) No community water treatment or distribution facilities serve the MCOSD open space preserves. The open space preserves serve to protect water

quality within several watersheds in Marin County. There are developed water storage and transmission facilities located in several of the MCOSD preserves. However, these facilities are components of larger urban water storage, treatment, and distribution systems, and do not provide treated water to preserves.

Implementation of the RTMP would not create any water treatment or supply facilities, lead to the provision of water treatment or distribution services, or result in any adverse effects to water supply or quality. Therefore, implementation of the RTMP would have no impacts related to water treatment or supply and no mitigation would be required. (For an evaluation of water quality, please refer to Chapter 11, Hydrology and Water Quality, of this RD TPEIR.)

During construction, the MCOSD will need some minor amounts of water, which it will bring to the site as needed. If available, the MCOSD would use recycled wastewater. The proposed project is consistent with the impacts analyzed in the RTMP EIR.

- e) *Would the project 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?*

No Additional Analysis Required

Refer to (a) above.

- f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 14-23) The MCOSD provides its own solid waste collection or disposal services for its open space preserves, mainly to support the collection and disposal of pet waste. Implementation of the RTMP would not create any solid waste collection and disposal services, nor result in an increase in demand for such services. Therefore, implementation of the RTMP would not result in any impacts related to solid waste collection and disposal and no mitigation would be required.

The project would not generate solid waste, other than minor amounts during construction. Adequate landfill capacity would be available for this minor amount of construction debris. The proposed project is consistent with the impacts analyzed in the RTMP EIR.

- g) *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

No Additional Analysis Required

Refer to (f) above.

ENERGY

XVII. ENERGY. Would the project:	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Additional Analysis Concludes Less Than Significant Impact
a) Result in a substantial increase in overall or per capita energy consumption?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in wasteful or unnecessary consumption of energy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Conflict with applicable energy efficiency policies or standards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Would the project result in a substantial increase in overall or per capita energy consumption?*

No Additional Analysis Required

The RTMP EIR concluded that:

(pg. 16-21) While implementation of the RTMP may not necessarily require increases in maintenance or construction activities overall, it could result in an increase of maintenance activities required in discrete locations in order to reduce existing adverse effects to satisfy the concept of net environmental benefit or to better maintain areas affected by increased use. However, this would not result in a significant, measurable increase in construction energy use attributable to the RTMP. Additionally, mitigation measure AQ-1 would require the MCOSD to modify its construction fleet over time to decrease air emissions. These modifications would also serve to decrease fuel use.

Operational fuel use associated with the RTMP would be from on-road vehicles transporting visitors and employees to and from trailheads. It is anticipated that any increase in travel would be the result of population growth and changes in the popularity of recreational activities. However, it is possible that the enhancements to the roads and trails system could result in minor increases in overall use and there could be minimal increases in operational vehicle energy use as a result of the RTMP with a corresponding minimal, unmeasurable increase in operational fuel use.

Therefore, because there would be no measurable increment of increase in construction or operational fuel usage with implementation of the RTMP, this would be a less-than-significant impact.

As a trail improvement project, the project would not result in a substantial increase in per capita energy consumption. The MCOSD would use some minor amounts of energy (e.g., gasoline or diesel for equipment) during construction, but this consumption would not be a substantial increase. The proposed project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

b) *Would the project result in wasteful or unnecessary consumption of energy?*

No Additional Analysis Required

Refer to (a) above.

c) *Would the project require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity the construction of which could cause significant environmental effects?*

No Additional Analysis Required

Refer to (a) above.

d) *Would the project conflict with applicable energy efficiency policies or standards?*

No Additional Analysis Required

Refer to (a) above.

MANDATORY FINDINGS OF SIGNIFICANCE

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.	No Additional Analysis Required	Additional Analysis Concludes Potentially Significant Impact	Additional Analysis Concludes Potentially Significant Unless Mitigation Incorporat ed	Addition al Analysis Conclude s Less Than Significa nt Impact
a) Does the project have the potential to 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, 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) *Does the project have the potential to 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, 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?*

No additional Analysis Required

Refer to Section IV, Biological Resources, of this Initial Study for discussion of the potential impact related to special-status and invasive species. The propose project is consistent with the impacts analyzed in the RTMP EIR therefore no additional analysis is required.

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.)*

No additional Analysis Required

The County of Marin identified two planning applications for development in the San Geronimo Valley referred to as the Murry project and the Tarigo project (Tejerian, 2016). The proposed Murry project is a new, single-family residence on an in-fill lot. The Tarigo project includes code violations and permitting previously completed work. Given the small-scale nature of each of these projects, and because of the policies and BMPs from the RTMP, these projects would not have significant individual or cumulative impacts. Therefore, there would not be any relevant cumulative impacts of concern.

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

No Additional Analysis Required

The proposed project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. With the implementation of the recommended mitigation measures and RTMP policies and BMPs, no impacts would result from the project.

REFERENCES

Marin County Open Space District (MCOSD), 2014a. *Road and Trail Management Plan Recirculated Final Tiered Program Environmental Impact Report*, November.

Marin County Open Space District (MCOSD), 2014b. *Road and Trail Management Plan*, December.

Tejerian, Jeremy, Marin County Community Development Agency, 2016. Email communication with C. Richardson, July 25.

**APPENDIX A
ROAD AND TRAIL MANAGEMENT PLAN
POLICIES AND BEST MANAGEMENT PRACTICES**



Policies Directing the Management of Roads and Trails on the MCOSD Preserves

Most of the policies governing the development and use of roads and trails on the MCOSD preserves were excerpted from the 2007 *Marin Countywide Plan*, approved by the Marin County Board of Supervisors, or the MCOSD Policy Review Initiative, adopted by the MCOSD Board of Directors. A number of new policies, developed as part of this plan and identified as such below, emphasize the importance of natural resource protection and the necessary limitations on visitor uses to achieve visitor safety, harmony of users, and protection of natural resources within acceptable limits.

These policies will be applied across the system of preserves, and will address multiple interests and concerns, which can be categorized as follows:

1. Meet current and future demand for access to public lands by providing roads and trails for a variety of users.
2. Ensure a sustainable road and trail system.
3. Protect sensitive resources.
4. Minimize user conflicts.
5. Enhance road and trail connectivity and improve the range of opportunities for visitors to experience the preserves.
6. Provide limited parking in appropriate locations.
7. Provide appropriate trail-related infrastructure (accessible entry structures and signs, for example).
8. Coordinate with adjacent landowners and respect private property rights.
9. Maintain user safety.
10. Other (i.e., the lawful authority of the MCOSD to restrict recreational use or to allow special use under certain circumstances).

Table 4.1 lists all of the policies that will guide the designation, development, management, and use of the road and trail system within the MCOSD preserves. The policies are listed according to their source (the *Marin Countywide Plan*, the *MCOSD Policy Review Initiative*, or this *Road and Trail Management Plan*). The table also indicates which of the above interests and/or concerns (numbers 1 – 10) are addressed by each policy.

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
Policies from the Marin Countywide Plan										
BIO-4.14: Reduce Road Impacts in Stream Conservation Areas (SCA). Locate new roads and road fill 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.			X							
BIO-5.f: Control Public Access. Design public use areas to be clearly marked, to minimize possible conflicts between public and private uses, to provide continuous walkways from the nearest roads to the shoreline and along the shoreline, to be set back from any proposed structure, and to be buffered from wetlands. Restrict access to environmentally sensitive marshland and adjacent habitat, especially during spawning and nesting seasons.			X				X	X		
BIO-4.k: Locate Trails Appropriately. Situate trails at adequate distances from streams to protect riparian and aquatic habitat and wildlife corridors. Trails may occasionally diverge close to the top of the bank to provide visual access and opportunities for interpretive displays on the environmental sensitivity of creek habitats.			X							
GOAL TRL-1: Trail Network Preservation and Expansion. Preserve existing trail routes designated for public use on the Marin Countywide Trails Plan maps, and expand the public trail network for all user groups, where appropriate. Facilitate connections that can be used for safe routes to school and work.	X				X					
TRL-1.1: Protect the Existing Countywide Trail System. Maintain the existing countywide trail system and protect the public's right to access it.	X									
TRL-1.2: Expand the Countywide Trail System. Acquire additional trails to complete the proposed countywide trail system, providing access to or between public lands and enhancing public trail use opportunities for all user groups, including multi-use trails, as appropriate.	X				X					
TRL-1.4: Coordinate Trail Planning. Promote collaboration among public land management agencies, nongovernmental organizations, and private landowners to implement the Marin Countywide Trails Plan and regional trail systems.								X		
TRL-1.b: Designate Trails Consistent with Agency Missions. Determine public use of trails consistent with each agency's mission and policies.								X		
TRL-1.d: Establish Regional Trail Connections. Strive to complete regional trail systems in Marin County, including the Bay Area Ridge Trail, the San Francisco Bay Trail, and the California State Coastal Trail. The proposed alignment of the Coastal Trail will be considered through process to update Marin County Local Coastal Plan.					X					
TRL-1.e: Explore Funding for Trail Acquisition. Consider developing or supporting legislation to assist trail acquisition. Consider public and private funding sources, including private endowments and bequests.	X									
TRL-1.g: Evaluate Proposed Development for Trail Impacts. Review development proposals for consistency with the Marin Countywide Trails Plan or local community plans.	X		X					X		
TRL-2.1: Preserve the Environment. In locating trails, protect sensitive habitat and natural resources by avoiding those areas.			X							
TRL-2.2: Respect the Rights of Private Landowners. Design and manage trails to avoid trespass and trail construction impacts on adjacent private land.								X		
TRL-2.3: Ensure User Safety. Plan and maintain trails to protect the safety of trail users.									X	

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
TRL-2.5: Provide Access for Persons with Disabilities. Design and develop trails and trail programs to enhance accessibility by persons with disabilities.	X									
TRL-2.6: Provide Multiple Access Points. Design trails with multiple access points to maximize accessibility and minimize concentrating access.	X									
TRL-2.7: Ensure Sustainable Maintenance. Continue to ensure that trails are responsibly maintained.		X								
TRL-2.8: Provide Trail Information. Strive to provide information to users that facilitates visitor orientation, nature interpretation, code compliance, and trail etiquette. Develop a method for signing trails to assist users and emergency personnel.							X			
TRL-2.a: Locate Trails to Protect Habitat. Align or relocate trails to avoid impacting sensitive habitats such as wetlands and areas where endangered species are present. Avoid aligning trails along the boundaries of sensitive habitats.			X							
TRL-2.b: Design, Build, and Manage Trails in a Sustainable Manner. Incorporate design measures that protect vegetation, protect habitats, and minimize erosion.		X	X							
TRL-2.c: Eliminate Trail Redundancy. Identify, abandon, and restore redundant or otherwise unnecessary trails or trail segments.	X		X							
TRL-2.d: Protect Private Property. Design and locate trails to avoid trespassing and adverse impacts on adjacent private lands and sensitive land uses.								X		
TRL-2.e: Design Safe Trails. Design trails so that their surfaces, grades, cross gradients, sight distances, width, curve radii, vegetation clearance, and other specifications are consistent with anticipated uses.									X	
TRL-2.f: Acknowledge Historic Trail Users. When acquiring a property for public use, consider trail use that occurred prior to the public acquisition.	X									
TRL-2.g: Promote Harmony Among Trail Users. Provide educational information, and consider special programs and events to promote trail etiquette and cooperation among trail user groups. Encourage interagency collaboration on countywide standards for trail etiquette to promote harmony among trail user groups.				X						
TRL-2.h: Identify Access Opportunities for Persons with Disabilities. Review existing access opportunities for persons with disabilities. Identify and pursue new opportunities.	X									
TRL-2.k: Ensure Trail Maintenance. Encourage public agencies to develop trail maintenance plans and enter into cooperative trail maintenance agreements. Encourage volunteer trail stewardship programs.		X								
TRL-2.l: Ensure Trail Maintenance Funding. Strive to identify and secure consistent sources of funding for trail maintenance. Develop a program for funding that explores trail adoption, trail maintenance annuities, jurisdictional cooperation, and other sustainable methodology.		X								
TRL-2.m: Maintain Trails in a Sustainable Manner. Consider and implement as appropriate.		X								
TRL-2.n: Promote Interagency Cooperation. Encourage information sharing and cooperation among public agencies concerning sustainable trail maintenance.		X						X		

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
TRL-2.p: Improve Code Compliance. Encourage trail managers to enforce codes, secure consistent funding for code enforcement, monitor the type and frequency of violations, and offer educational materials and programs to reduce code violations. Expand or create volunteer opportunities to monitor trail use.		X	X		X		X			
Policies from the MCOSD Policy Review Initiative										
Policy P1: The MCOSD will rely primarily on public rights-of-way to provide the parking capacity necessary to serve open space visitors arriving by motorized vehicle.						X				
Policy P2: The MCOSD will strive to provide multiple points of entry to open space, to maximize available parking capacity and to avoid concentrating access.						X				
Policy P3: The MCOSD will encourage open space visitors to walk, bicycle and carpool to open space.						X				
Policy P4: The MCOSD should partner with police and fire departments to enforce lawful parking at entrances to open space.						X				
Policy P5: The MCOSD may seek increased parking capacity on a case-by-case basis, including the development of parking facilities on the MCOSD lands where necessary for public safety, and where resource conditions permit.						X				
Policy T1a: The MCOSD will allow trail-based uses on open space, because the ability of the public to access and enjoy open space enhances the quality of life in Marin.	X									
Policy T1b: The MCOSD will permit use of fire protection roads by open space visitors on foot, on a bicycle, and with a saddle animal, but may limit any or all uses when appropriate.	X		X	X						
Policy T1c: The MCOSD will permit use of trails by visitors on foot and with a saddle animal, but may limit any or all uses when appropriate.	X		X	X						
Policy T1d: The MCOSD will permit bicycling on trails designated for their use, including (a) new trails that the MCOSD builds and designates for shared use and (b) existing trails on new lands, when compatible with natural resource protection and the safety of trail users: (Existing policy to be revised as stated below in Policy T1d.)										
Policy T1e: The MCOSD will prohibit trail use conduct and other trail use modes that compromise the protection of natural resources or the safety of open space visitors.			X						X	
Policy T1f: The MCOSD will discourage the use of trails that are not part of its system of maintained trails when use of such trails is inconsistent with natural resource protection.										
Policy T1g: The MCOSD will prohibit the use of motorized vehicles on open space, with authorized exceptions.										X
Policy T2a: The MCOSD will use best management practices in the design, construction, and maintenance of trails.		X								
Policy T2b: The MCOSD will strive to coordinate trail design and management with the owners and managers of adjoining lands.								X		
Policy T2c: The MCOSD will strive to provide information, including signs, to trail users that facilitate visitor orientation, nature interpretation, code compliance, and proper trail etiquette.							X			

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
Policy VA2: The MCOSD may provide visitor amenities such as (a) informational displays and signs; (b) portable restrooms in areas where group use is seasonally frequent; (c) facilities for watering and tying equines; and (d) bicycle racks.							X			
Revisions to Existing Policies (adopted as part of this Road and Trail Management Plan)										
Policy T1d: The MCOSD will permit bicycling and saddle animals on trails designated and signed for their use, including (a) existing trails and new trails that the MCOSD builds and designates for shared use; and (b) existing trails on newly acquired lands, when compatible with natural resource protection and the safety of trail users.	X		X						X	
New Policies (adopted as part of this Road and Trail Management Plan)										
Policy SW.1: Application of this Road and Trail Management Plan Policies. The policies and requirements of this plan will apply within all open space preserves, and within any new preserves that may be established. These policies will also apply to existing and future trail easements unless they would conflict with the terms of the easement, in which case the easement will prevail.	X	X	X	X	X	X	X	X	X	X
Policy SW.2: System Roads and Trails. The MCOSD will, following adoption of this plan, designate a system of roads and trails, referred to as “system roads and trails”, in all existing and new open space preserves, through a collaborative public process. Those roads and trails eligible for consideration as part of the system must have been constructed as of November 2011. The MCOSD may improve, maintain, convert, or reroute system roads and trails according to the policies and requirements of this plan, as time and resources allow. Nonsystem roads and trails, defined as those roads and trails not designated as system roads and trails, may be decommissioned at any time, as time and resources allow.	X	X	X	X	X	X	X	X	X	X
Policy SW.3: Social Trails. For the purpose of this policy, social trails are defined as narrow pedestrian footpaths that a) were not constructed; and b) have not been improved, managed, or maintained. This definition extends to wildlife trails used occasionally by pedestrians. This plan recognizes that, for all practical purposes, social trails will continue to exist after the system of roads and trails has been designated. Social trails are not subject to closure or decommissioning unless a) their continued existence compromises public safety; b) results in unacceptable levels of erosion, or damage or disruption to plants and wildlife; c) their volume of use increases; and/or d) they are used by equestrians or bikers.	X	X	X						X	
Policy SW.4: Overall Reduction of Road, Trail, and Visitor Impacts. The designated system of roads and trails will have less overall impact to resources compared to the network of roads and trails existing as of November 2011. Impacts will be reduced by decommissioning nonsystem roads and trails, and by the improvement, conversion, or rerouting of system roads and trails. The MCOSD will maximize the reduction of road, trail, and visitor impacts in Sensitive Resource Areas, compared to Conservation Areas and Impacted Areas. Impacted Areas will exhibit the widest range of acceptable road, trail and visitor impacts.		X	X							
Policy SW.5: Policy on Pedestrian Activities. Pedestrians are encouraged to stay on system roads and trails.	X	X	X							
Policy SW.6: Prohibition on Off-Road or Off-Trail Equestrian Use. Horses and pack animals must stay on system roads and trails, except when watering or resting the animal. Off-trail riding is prohibited. Riding or possession of a horse or pack animal on nonsystem roads and trails is prohibited. Riding or possession of a horse or pack animal on social trails is prohibited.	X	X								

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
Policy SW.7: Prohibition on Off-Road or Off-Trail Bicycle Use. Mountain bikers must stay on system roads and trails designated for bicycle use. Off-trail riding is prohibited. Riding or possession of a bicycle on nonsystem roads and trails is prohibited. Riding or possession of a bicycle on social trails is prohibited.	X	X								
Policy SW.8: Prohibition on Off-Road or Off-Trail Pedestrians with Dogs or Other Domestic Animals. Pedestrians with dogs and other domestic animals must stay on system roads and trails. Off-trail use by pedestrians with dogs and other domestic animals is prohibited. Use of nonsystem roads and trails, and social trails, by pedestrians with dogs and other domestic animals is prohibited.	X									
Policy SW.9: Prohibition of Dogs within Sensitive Water Resources. Dogs are not allowed to travel, run, walk, hunt, or bathe in streams or any sensitive water bodies, such as marshes, lakes, or ponds, within the preserves.			X							
Policy SW.10: Policy on Leash Only Preserves. Due to the occurrence of sensitive resources, dogs must be leashed on all roads and trails in those preserves currently designated as “leash only” (i.e., Cascade Canyon, Ring Mountain, and Rush Creek Preserves). The MCOSD may designate other “leash only” preserves in the future.			X							
Policy SW.11: Policy on Leash Requirements for Dogs. Dogs must be on leash (no more than 6 feet in length) a) in all designated “leash only” preserves; and b) on all trails. Dogs may be off leash, but under voice control, only on fire roads that are not within leash only preserves. The MCOSD will identify roads passing through leash only preserves with signs. Dogs under voice control must remain on the fire road.	X									
Policy SW.12: Road and Trail Connectivity. The MCOSD will strive to increase road and trail connectivity for all trail users. The MCOSD will strive to provide opportunities for short to medium distance loops and long-distance routes. The MCOSD may consider one-way, uphill-only, time separation, and single-use or priority-use trails to achieve these ends.	X				X					
Policy SW.13: Prohibition on Dangerous Activities. Activities that exceed the established speed limit, are reckless, or pose a danger to the user or to other road and trail users, are prohibited.	X								X	
Policy SW.14: Road and Trail Etiquette. All road and trail users will practice good etiquette at all times. Mountain bikers will always yield to both hikers and equestrians. Hikers will yield to equestrians. Mountain bikers must announce their presence by using a bell or calling out when overtaking other trail users.	X			X						
Policy SW.15: Expectation of Active Cooperation of All Road and Trail Users. Increased trail use opportunities must be coupled with cooperation among all trail users, and with the MCOSD, to promote lawful trail use, reduce violations, reduce impacts to natural resources, prevent displacement of any trail user types, minimize disturbance to existing neighbors, and avoid endangerment of other trail users.				X			X		X	
Policy SW.16: Prohibition of Uses. The MCOSD may prohibit certain trail uses or apply increased trail use restrictions within certain areas to enhance safety, minimize conflicts between trail users, and protect natural resources. Examples of areas where this policy may apply include, but are not limited to, those proximate to stables and those traditionally heavily traveled by equestrians, and in Sensitive Resource Areas.			X		X				X	
Policy SW.17: Displacement of Existing Trail Users. The MCOSD will strive to prevent displacement of equestrians and pedestrians when accommodating trail access and trail connections for mountain bikers. When considering the designation of existing trails as single-use or priority-use, the MCOSD will take care to maintain connectivity between destinations for user groups historically using those trails.	X				X					

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
Policy SW.18: Unauthorized Trail Construction and Maintenance. The MCOSD has no tolerance for unauthorized trail construction and unauthorized reopening of closed or decommissioned roads and trails. The MCOSD will prosecute such violations to the fullest extent of the law. The MCOSD will apply new deterrence methods, including rigorous investigation and increased penalties to stop such damaging and unlawful activities.	X		X							
Policy SW.19: Redundant Roads and Trails. Redundant roads or trails are defined as those that roughly parallel an existing route serving essentially the same purposes, uses, and user groups. Through designation of the road and trail system, the MCOSD will reduce the overall level of redundancy compared to baseline levels and when doing so will exclude from designation the road or trail segment or segments that have the highest overall maintenance costs and the worst profile of environmental impacts. The MCOSD may strategically retain some redundant roads and trails in the interest of separating user groups and avoiding user conflict. Redundant roads and trails that are not designated as system roads and trails will be decommissioned as time and resources allow. All decommissions of redundant fire road segments will be subject to consultation with Marin County Fire and the relevant local fire agencies.	X	X	X							
Policy SW.20: Conversion of System Roads to Trails. The MCOSD may convert system roads to trails to protect natural resources, enhance visitor experience and/or safety, or align maintenance costs with available funds. System roads encumbered by license, lease, or easement for nonrecreational purposes, and roads required for maintenance or emergency access, may not be converted to trails unless encumbrances are removed or roads are no longer necessary for maintenance or emergency use.	X	X	X						X	X
Policy SW.21: Roads or Trails Serving Nonrecreational Uses. Roads or trails subject to or encumbered by license, lease, or easement, for nonrecreational purposes, and those roads required for maintenance or emergency access, will become system roads and trails, unless encumbrances are removed or roads are no longer necessary for maintenance or emergency use.							X	X		X
Policy SW.22: Protect High-Value Vegetation Types. As a general policy, visitors will be directed away from areas of high-value vegetation types, as identified in the MCOSD’s mapped Legacy Vegetation Management Zones and other more site specific biotic assessments undertaken or commissioned by the MCOSD, to prevent disturbance and adverse impact. This will be done through the appropriate placement of new and rerouted trails, by erecting fencing, or by installing educational signs that provide information about the resource values being protected.			X							
Policy SW.23: Identify High Value Biological Resources. Designation of the road and trail system and evaluation of road and trail project proposals will be based on best available data, including inventories of wildlife, and vegetation resources. The MCOSD will undertake site specific and programmatic efforts to extend and improve upon the biological data underlying its decision-making criteria. System designations, project design, and project implementation are subject to amendment on the basis of new information.			X							
Policy SW.24: Minimize Intrusions into Larger Contiguous Habitat Areas and Wildlife Corridors. In designating the system of roads and trails, the MCOSD will minimize their adverse effects on sensitive vegetation, as well as, habitat connectivity and migration corridors for all native species of wildlife.			X							
Policy SW.25: Helmet Requirement. Per California state law, bicycle riders less than 18 years old are required to wear a helmet when riding on the MCOSD roads and trails.									X	
Policy SW.26: Control or Restrict Access to Ignition Prevention Zones when Red-Flag Conditions Exist. Appropriate actions will be taken to minimize the risk of wildfire ignition when red-flag conditions exist. These actions may include prohibiting vehicle access, closing trails, or closing entire areas to all human activities until red-flag conditions expire. The public will be informed of the reasons why such actions are being taken, and areas will be patrolled to ensure compliance.									X	

Table 4.1 Policies Governing the MCOSD Roads and Trails

	1. Public Access	2. Sustainability	3. Resource Protection	4. User Conflicts	5. Connectivity	6. Parking	7. Infrastructure	8. Adjacent Landowners	9. Safety	10. Other
Policy SW.27: Protect High-Value Cultural and Historic Resources by Rerouting or Confining Visitor Access. Areas of high-value cultural and historic resources will be protected from disturbance and adverse impact. This will be done through the appropriate placement of trails, by erecting barriers, or other methods to discourage access.	X		X				X			
Policy SW.28: Remove or Realign Roads and Trails Away from High-Value Cultural and Historic Resources. As a general policy, designated roads and trails will be rerouted away from high-value cultural and historic resources whenever possible and feasible. Areas where roads or trails are removed will be restored to natural conditions. The removal or realignment of roads will be done in consultation with Marin County Fire and other local fire agencies.	X		X				X			
Policy SW.29: Retrofit or Upgrade Construction Equipment. Work with the Bay Area Air Quality Management District to implement feasible actions from the 2010 Clean Air Plan MSM C-1 – Construction and Farming Equipment. Pursue funding to retrofit the existing construction equipment engines with diesel particulate filters or upgrade to equipment with electric, Tier III, or Tier IV off-road engines. Seek to rent construction equipment that meets these criteria, if available.										X
Policy SW.30: Permeable Paving. For any new parking areas and other large areas of potentially impermeable surfaces, use permeable paving or an equivalent for all paved areas to provide for the infiltration of rainfall.						X	X			
Policy SW.31: Floodplain Policy for New and Improved Roads and Trails. The MCOSD will review current Federal Emergency Management Agency Flood Insurance Rate Maps and other current flood maps to assess potential flood impacts to any proposed new or improved road, trail, or associated facilities located in the lower elevation bayland or coastal areas (i.e., Santa Margarita Island, Santa Venetia Marsh, Bothin Marsh, Rush Creek, Deer Island, and Bolinas Lagoon). In cases where a flood risk is identified, proposed facilities shall either be relocated outside of the flood prone area or designed and constructed in a manner to protect public safety and not increase base flood elevations. As part of public safety, the MCOSD shall also review the most current Tsunami Inundation Maps as part of the trail improvement planning efforts in those areas in order to identify areas that may require escape plans or proper notification.	X	X	X						X	
Policy T.1: Loop and Long Distance Trail Connections. When designating system roads and trails, the MCOSD will seek to maintain and/or develop new opportunities for loop and long-distance travel, when such opportunities do not conflict with resource protection or visitor safety.	X				X					
Policy T.2: Visitor Amenities. The MCOSD may provide or permit visitor amenities such as a) facilities to encourage the pickup and disposal of pet waste; b) watering opportunities for horses and other pack animals; c) potable water; and d) small bike repair stations.	X						X			
Policy T.3: Visitor Safety. The safety of all road and trail users depends in large part on visitor conduct. The MCOSD expects that all users will conduct themselves in a safe manner, to protect their own safety and the safety of other users. The MCOSD shall consider visitor safety in designating the road and trail system.				X					X	

Special Use Policies

In addition to providing public access for recreational uses, the MCOSD preserves also allows uses such as commercial dog walking, recreational events, and access for utility providers such as Verizon and PG&E. There is a need for a consistent and structured approach for the MCOSD to respond to requests for special uses. New policies to accomplish this are described below.

Policy SP-1: Lease/License/Other Form of Approval Required for Land Management or Utility Activities. Consistent with the MCOSD's Nonconforming Use Policy, all agencies and service providers requesting access to open space preserves will be required to obtain a lease, license, or other form of approval from the MCOSD describing the purpose and timing of their activities. The MCOSD may impose fees and conditions. Such conditions may include, but will not be limited to, the timing of the activity with respect to seasonal and weather concerns, the protection of natural resources, and the location of the activity. The MCOSD's Nonconforming Use Policy provides specific guidance for permitting use of open space by utilities, water districts, and other similar entities.

Policy SP-2: Permit Required for Organized Recreational Activities or Events. All private parties or public agencies requesting access to the MCOSD preserves for recreation-related or other special events will be required to complete and obtain a permit detailing the purpose and timing of their activities. The MCOSD may impose fees and conditions. Such conditions may include, but will not be limited to, the timing of the activity with respect to seasonal and weather concerns, the number of participants, the protection of natural resources, and the location of the activity. An administrative fee will be charged by the MCOSD for reviewing and granting any permits. Additional fees may be incurred by the applicant for administration and monitoring of the event by the MCOSD staff, or if compliance with the California Environmental Quality Act or any regulatory permit is required. The MCOSD insurance and indemnity requirements will also apply.

Policy SP-3: Prohibition on Unofficial, Nonsponsored Group Activities. Any unofficial, nonsponsored outdoor recreation event involving more than 15 participants is prohibited.

Table 6.1 General Best Management Practices

BMP ID	DESCRIPTION
<p>General-1</p> <p>Limit Work Area Footprints in Sensitive Resource Areas</p>	<p>Limit the size of construction-related road and trail management activities to the minimum size needed to meet project objectives. BMPs include:</p> <ul style="list-style-type: none"> • Minimize project footprint. Minimize the size of the work area, including the project area, access roads, and staging areas. Wherever possible, use existing upland roads, trails, and other disturbed areas for project activities in order to reduce unnecessary disturbance, minimize soil and water erosion, and reduce overall project costs. • Reduce or relocate footprint during planning and design phase. Reduce the work area footprint in sensitive resource areas or move the work area to common natural communities and upland areas. Implement further refinements during site preparation and construction to further reduce impacts. • Minimize soil disturbance. Minimize soil disturbance to the greatest extent possible to reduce the potential for introducing or spreading invasive plants, to protect topsoil resources, and to reduce available habitat for the establishment of new invasive plants. • Mark project footprint near sensitive natural resources. Mark ingress/egress routes, staging areas, and sensitive resources to prevent inadvertent impacts to sensitive resources. • Restrict soil disturbance and import of nonnative soil or fill material. To reduce the potential for damage of native plants and/or introduction of invasive plants, the contractor will be required to minimize the footprint of soil disturbance to the minimum amount necessary to complete the contracted work. In particular, access roads, staging areas, and areas of temporary disturbance will be minimized in size. The contractor and its staff and subconsultants agree not to drive off-road or drive or park on native vegetation unless approved in advance by the MCOSD natural resource staff. The contractor agrees that if soil excavation is required, every attempt will be made to have a balanced cut and fill project that reuses all native soils onsite. No nonnative soil or fill material will be brought onsite, or used during the contractor's activities unless approved by the MCOSD natural resource staff.
<p>General-2</p> <p>Modify Construction-Related Vegetation Management Methods in and near Wetlands, Riparian Vegetation</p>	<p>Restrict construction-related vegetation management near wetlands in a manner that reduces the potential for sediment or pollutants to enter wetlands. Implement the following BMPs, as needed:</p> <ul style="list-style-type: none"> • Establish a buffer of 100 feet from wetland and tidally influenced areas (i.e., from the ordinary high water mark of flowing or standing water in creeks, streams, or ponds). Avoid construction work within this buffer area. • If construction work in wetlands and riparian areas cannot be fully avoided, consult with the appropriate state and federal agencies to obtain permits. • Within the buffer, restrict routine vegetation management activities in creeks, streams, other waterways, and tidally influenced areas. Limit vegetation management work to least-harmful methods; restrict herbicides to those that are EPA-approved for use near water. Prohibit activities that disturb soil or could cause soil erosion or changes in water quality. • Within the buffer, limit work that may cause erosion to the low flow or low tide periods. Low flow months for local creeks are typically August to October. For tidal areas, work will not occur within 2 hours of high tide events at construction sites when high tide is greater than 6.5 feet measured at the Golden Gate Bridge, using corrections for areas near individual MCOSD preserves. Tide charts are available online from the National Oceanic and Atmospheric Agency/National Weather Service (http://www.wrh.noaa.gov/mtr/sunset.php).

Table 6.1 General Best Management Practices

BMP ID	DESCRIPTION
	<ul style="list-style-type: none"> • Within the buffer, minimize erosion and sedimentation; maintain erosion and sediment control devices during ground disturbing activities and until all disturbed soils have been stabilized. Measures include weed-free straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. • Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to protect water quality for work in or near wetlands, ponds, seeps, creeks, tidal areas, or stream crossings.
General-3 Minimize Potential for Erosion	Conduct road and trail activities in a manner that controls and minimizes the potential for soil erosion and contribution of sediment to wetlands. Implement the following as needed: <ul style="list-style-type: none"> • To minimize erosion and sedimentation, maintain erosion and sediment control devices during ground disturbing activities and until all disturbed soils have been stabilized. Measures include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. • Unless no feasible alternative is available, avoid using heavy equipment in areas with soils that are undisturbed, saturated, or subject to extensive compaction. Where staging of heavy equipment, vehicles, or stockpiles is unavoidable, limit and mark the allowable disturbance footprint with flagging or fencing. Following the end of work, scarify surface soils to retard runoff and promote rapid revegetation. • Immediately rehabilitate areas where project actions have disturbed soil. Require areas disturbed by equipment or vehicles to be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion control materials, revegetating areas with native plants, and removing and monitoring invasive plants.
General-4 Control Food-Related Trash	Food-related trash can attract wildlife to road and trail project sites. Store food-related trash in closed containers and remove from the project site daily
General-5 Modify Construction Methods Relating to Soil Disturbance, Restrict use of Offsite Soil, Aggregate, or Other Construction Materials	Conduct construction-related vegetation management in a manner that restricts the use of offsite materials that could introduce or spread invasive plants. Implement the following as needed: <ul style="list-style-type: none"> • Minimize soil disturbance. Minimize soil disturbance to the greatest extent possible to reduce the potential for introducing or spreading invasive plants, to protect topsoil resources, and to reduce available habitat for the establishment of new invasive plants. • Do not allow the introduction of incompatible fill. Use only clean, native soils and aggregate materials from projects within the preserve, or use fill that is purchased from a certified weed-free source, before allowing the importation of materials from outside the preserves. Fill materials should be approved by natural resource staff to ensure compatibility with future restoration/rehabilitation goals. • Segregate and treat soils and vegetation contaminated with invasive plant seeds and propagules. Treat, as appropriate, to prevent the spread of invasive plants. Treatment may include disposal onsite within already infested areas, chipping or pile burning and mulching to eliminate viable seeds, or disposal at an approved cogeneration plant or green waste facility. • Salvage, store, and reuse topsoil. Where activities disturb soil temporarily, require salvage of the top 6 to 12 inches of topsoil (to retain seeds, soil mycorrhizae, and fungi) from all excavation and disturbance areas. Require reapplication of the salvaged topsoil as a topdressing or topcoat over backfill, unless known to contain invasive plant seeds or propagules. • Establish dedicated areas for cleaning vehicles, inside and out, of soil or invasive plant seeds or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving preserves. Within the wash areas, the tires and body of vehicles and equipment will be brushed off and/or hosed down. • Inspect construction equipment for soil or invasive seeds or plant parts. Require contractors to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving preserves. • Develop a native seed mix for erosion control. Develop the seed mixture on a project-by-project basis based on the observed mixture of native and naturalized plants in and near the impact area. Where possible, ensure that seeds are collected locally (i.e., within the same watershed or preserve as the impact), or obtained from a reputable native plant nursery specializing in seed that is collected from local sources. • Maintain erosion and sediment control devices during ground disturbing activities and until all disturbed soils have been stabilized to help minimize erosion and sedimentation. Measures include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified as weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and not of plastic monofilaments or other materials that could entrap snakes or amphibians.

Table 6.1 General Best Management Practices

BMP ID	DESCRIPTION
	<ul style="list-style-type: none"> • Immediately rehabilitate areas where road and trail project activities have disturbed soil. Areas disturbed by equipment or vehicles should be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion control materials, revegetating areas with native plants, and removing and monitoring invasive plants.
General-6 Prevent or Reduce Potential for Pollution	<p>Ensure that actions are taken during ongoing road and trail project activities to prevent or reduce the potential for pollutants entering the MCOSD preserve. Implement the following as needed:</p> <ul style="list-style-type: none"> • Prohibit, or restrict equipment refueling, fluid leakage, equipment maintenance, and road surfacing activities near wetlands. Require placement of fuel storage and refueling sites in safe areas well away from wetlands. Safe areas include paved or cleared roadbeds, within contained areas such as lined truck beds, or other appropriate fuel containment sites. Inspect equipment and vehicles for hydraulic and oil leaks regularly. Do not allow leaking vehicles on the MCOSD preserves, and require the use of drip pans below equipment stored onsite. Require that vehicles and construction equipment are in good working condition, and that all necessary onsite servicing of equipment be conducted away from the wetlands. • Require all contractors to possess, and all vehicles to carry, emergency spill containment materials. Absorbent materials should be on hand at all times to absorb any minor leaks and spills.
General-7 Include Standard Procedures in Construction Contracts	<p>When using contractors to perform vegetation management, related to road and trail project activities, the MCOSD will include some or all of the following standard procedures in those contracts.</p> <p>The contractor will work with the MCOSD natural resource staff to determine the optimal timing of contracted work. Many timing restrictions relate to protecting special-status species. Other types of timing restrictions include timing to control invasive plants; timing to avoid migration, gestation, or flowering periods for special-status species; or timing work in wetlands to the dry season.</p> <ul style="list-style-type: none"> • Establish a buffer of 100 feet from wetland and tidally influenced areas (i.e., from the ordinary high water mark of flowing or standing water in creeks, streams, or ponds). Avoid construction work within this buffer area. <ul style="list-style-type: none"> » Within the buffer, limit work that may cause erosion to low flow periods. Low flow months for local creeks are typically August to October. For tidal areas, work will not occur within 2 hours of high tide events at construction sites when high tide is greater than 6.5 feet measured at the Golden Gate Bridge, using corrections for areas near individual MCOSD preserves. Tide charts are available online from the National Oceanic and Atmospheric Agency/National Weather Service (http://www.wrh.noaa.gov/mtr/sunset.php). » If construction work cannot be fully avoided in wetlands and riparian areas, consult with the appropriate state and federal agencies to obtain permits. » Require the contractor to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to protect water quality for road and trail project work in or near wetlands, ponds, seeps, creeks, tidal areas, or stream crossings. <p>The contractor will work with the MCOSD natural resource staff to identify any priority invasive plants that occur near the project work area, including the project footprint, access roads, staging areas, and similar work areas. The contractor agrees to comply with requirements to reduce the spread or transport of priority invasive plants related to construction activities. Requirements may include some or all of the following:</p> <ul style="list-style-type: none"> » Conduct a training program for all field personnel involved with the proposed road and trail project prior to initiating project. The program will consist of a brief presentation by person's knowledgeable in the special-status species, sensitive resource, or invasive plants known from the project area. The program will include the following: a photograph and description of each special-status species, sensitive resource, or invasive plant known from the project area; 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. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). » Restrict work to periods when invasive plants are not in fruit or flower. » Establish dedicated area for cleaning vehicles, inside and out, of soil or invasive plant seeds or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving preserves. Within the wash areas, the tires and body of equipment will be brushed off or hosed down. » Inspect construction equipment for soil or invasive seeds or plant parts. Require contractors to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving preserves. » Dispose of green waste in a manner that does not spread invasive plants. Methods include onsite disposal in an already infested area; offsite disposal to a cogeneration plant or an approved green waste composting facility).

Table 6.1 General Best Management Practices

BMP ID	DESCRIPTION
	<p>Protect environmentally sensitive areas. The MCOSD natural resource staff will identify any Environmentally Sensitive Areas in or near the road and trail project area prior to the start of work. Environmentally Sensitive Areas may include: special-status plant or wildlife species or their habitats (e.g., woodrat nests, habitat for special-status plant and wildlife species, individuals or populations of listed special-status plant or wildlife species or locally rare species); wetlands including creeks streams and related riparian area; and sensitive vegetation types as described in this report. The MCOSD staff and contractors will fully avoid and protect such areas during habitat restoration work, or will help obtain and comply with necessary permits and regulatory requirements.</p> <ul style="list-style-type: none"> » Use locally collected plant materials for revegetation projects. Plant materials will be collected onsite at the MCOSD preserves or within the same watershed as the revegetation project. The contractor will work with the MCOSD to identify native plant nurseries that can collect and propagate seed and other plant materials from the local area. No use of commercial grassland mixtures for erosion control unless approved in advance by the MCOSD. The contractor will allow the MCOSD to inspect and approve all plant materials and seed prior to use onsite. » Protect special-status species habitat. For vegetation work in or near special-status species habitat, the contractor is required to comply with requirements of the MCOSD project permits to protect special-status species and their associated habitats before and during construction, and to cooperate with the MCOSD in implementing any state and federal permits and agreements for the project. The special-status species population plus a buffer should be designated as an "Environmentally Sensitive Area" using lath and flagging, pin flags, or temporary fencing (depending on resource sensitivity to work). The contractor will be required to avoid all designated Environmentally Sensitive Areas during construction. For any special-status species or their habitats that cannot be fully avoided, the contractor will work with the MCOSD to obtain and comply with federal and state Endangered Species Acts, the federal Migratory Bird Treaty Act, and the state Fish and Game Code permits and agreements. » Restrict soil disturbance, import of nonnative soil or fill material. To reduce the potential for damage of native plants and/or introduction of invasive plants, the contractor will be required to minimize the footprint of soil disturbance to the minimum amount necessary to complete the contracted work. In particular, minimize the footprint of access roads, staging areas, and areas of temporary disturbance. The contractor and its staff and subconsultants agree not to drive off-road or drive or park on native vegetation unless approved in advance by the MCOSD natural resource staff. The contractor agrees that if soil excavation is required, every attempt will be made to have a balanced cut and fill project that reuses all native soils onsite. Unless pre-approved by the MCOSD natural resource staff, there will be no use of nonnative soil or fill material during the contractor's activities. » To minimize erosion and sedimentation, maintain erosion and sediment control devices during ground disturbing activities and until all disturbed soils have been stabilized. Measures include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials will be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion control materials will be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. <p>Other procedures:</p> <ul style="list-style-type: none"> • All entry gates to the project site not used for construction access will be locked at all times and gates used for construction access will be locked during non-construction hours. • All vehicles will carry a suitable fire extinguisher. • Immediately rehabilitate areas where project actions have disturbed soil. Require areas disturbed by equipment or vehicles to be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion control materials, revegetating areas with native plants, and removing and monitoring invasive plants. • Unless no feasible alternative is available, avoid using heavy equipment in areas with soils that are undisturbed, saturated, or subject to extensive compaction. Where staging of heavy equipment, vehicles, or stockpiles is unavoidable, limit and mark the allowable disturbance footprint with flagging or fencing. Following the end of work, scarify surface soils to retard runoff and promote rapid revegetation.
<p>General-8 Control Noise</p>	<p>To reduce daytime noise and potential disturbance to wildlife species, the MCOSD will require contractors to muffle or control noise from equipment through implementation of the following measures:</p> <ul style="list-style-type: none"> • Equipment and vehicles should utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, and use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds, and installation of sound blanket around the project site.

Table 6.1 General Best Management Practices

BMP ID	DESCRIPTION
General-9 Conduct Worker Training	<p>The MCOSD will conduct a worker-training program for all field personnel involved with the proposed road and trail management 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).</p>
General-10 Road and Trail Inspections	<ul style="list-style-type: none"> • Regularly inspect road and trail features and associated infrastructure to ensure they are well maintained and posing no threat to surrounding sensitive and/or special-status natural resources. Staff will record information pertaining to the status of biophysical resources that could be affected by road or trail use, maintenance, or management activities. These inspections will monitor for the spread of invasive, exotic plants that could affect sensitive and/or special-status native plant or wildlife habitats and any other changes that could create negative impacts to known sensitive and/or special-status native plant or wildlife populations in the immediate vicinity. Staff will report any findings and make recommended corrective actions if appropriate.
General-11 Management of Sudden Oak Death	<p>To reduce and control the spread of Sudden Oak Death (SOD) within the MCOSD system, the following practices will be implemented.</p> <p>The MCOSD staff will educate visitors about preventing the spread of Sudden Oak Death (SOD).</p> <ul style="list-style-type: none"> • The MCOSD may use interpretive signs, brochures, ranger talks, and other online and print materials that explain the importance of preventing the spread of pathogens and use of preventative measures. • The education materials should explain that SOD occurs within the preserve; identify typical symptoms; explain that SOD can be spread by park users, especially during rainy and windy weather; and request that park visitors: <ul style="list-style-type: none"> » Use designated parking areas » Avoid transporting SOD on shoes, bicycles, and the feet of pet dogs and horses through the use of cleaners and disinfectants. <p>The MCOSD staff shall be trained about SOD host species and disease transmission pathways and, when undertaking road and trail construction and maintenance activities in areas of the preserves affected by SOD, shall implement the following measures.</p> <ul style="list-style-type: none"> • Clean equipment, boots, truck tires, and any other exposed material after working in forest and woodland habitats, with a 10% bleach solution or other disinfectant • Avoid pruning oaks or other affected trees in wet weather. • Avoid work in forest and woodlands during the wet season when spores are being produced and infections are starting. • Leave potentially infected downed trees on site instead of transporting the material to an uninfected area. • Remove potentially infected downed trees from the property only if it is the first infected tree to be detected in the area or if there is a high fire risk. • Dispose of infected materials at an approved and permitted dump facility within the 14-county infected quarantine zone. • If necessary to reduce safety or fire hazards or to address aesthetic or recreational impacts, cut, branch, chip, and/or split infected trees in areas where the material would be less likely to be transported to an uninfected location. • Purchasing nursery stock for restoration plantings at nurseries that follows current BMPs for preventing the spread of SOD (consult the California Oak Mortality Task Force, www.suddenoakdeath.org, for current standards). • Inspect all plant materials for symptoms of SOD before bringing any plants onto the property.

The Best Management Practices listed in table 6.2 below apply to all activities related to road and trail projects to be conducted near known or suspected locations of high-value natural resources, including special-status wildlife and plants and sensitive vegetation types. Implementation of these best management practices will reduce the potential for adverse effects on these resources during road and trail project activities, and ongoing road and trail maintenance activities. Each BMP is written to stand on its own. As a result, there is some unavoidable overlap and repetition between the BMPs.

Table 6.2 Sensitive Natural Resources Best Management Practices

BMP	Description
Sensitive Natural Resources-1 Modify Management Practices near Sensitive Natural Resources	<p>For construction related activities requiring extensive ground disturbance in and near known sensitive biological resources, the MCOSD will assess the project or proposed action prior to the start of work to suggest modifications to standard procedures considered necessary to help ensure avoidance of impacts to special-status species and other sensitive biological resources. Actions that may be taken include one or more of the following:</p> <ul style="list-style-type: none"> • Mark project footprint near sensitive natural resources. Mark ingress/egress routes, staging areas, and sensitive resources to prevent inadvertent impacts to sensitive resources. • Inspect ingress/egress routes, escort vehicles, and equipment onto the site if necessary to help prevent impacts on ground nesting and ground dwelling species. Work should be conducted during bird non-breeding season (published California Department of Fish and Wildlife non-breeding season dates are August 15-March 1, but should be adjusted to local conditions). • Maintain a 15 MPH speed limit in sensitive habitat areas. This will reduce the potential for mortality, dust impacts on vegetation and wildlife. For larger projects, water the roads for dust control near sensitive resources.

Table 6.3 Special-Status Wildlife Best Management Practices

BMP ID	Description
Special-Status Wildlife-1 Literature Reviews	<p>Prior to all road and trail management activities, literature reviews will be conducted to determine if special-status wildlife-species or critical habitats exist within the project area.</p> <p>The first source reviewed will be the MCOSD's database of special-status wildlife occurrences and sensitive habitats. This database is actively updated and maintained by the MCOSD natural resource staff and contains the most relevant data on sensitive resources on MCOSD land.</p> <p>In addition to the MCOSD database, the following resources will be reviewed, as necessary, prior to work:</p> <ul style="list-style-type: none"> • U.S. Geological Survey topographic maps • Aerial photographs • California Department of Fish and Wildlife Natural Diversity Database records • U.S. Fish and Wildlife Service quadrangle species lists • University of California at Davis Information Center for the Environment Distribution Maps for Fishes in California • National Marine Fisheries Service Distribution Maps for California Salmonid Species <p>Database searches for known occurrences of special-status wildlife species will focus on the vicinity of the project area. Biological communities will be classified as sensitive or nonsensitive as defined by the California Environmental Quality Act and other applicable laws and regulations</p>
Special-Status Wildlife-2 Preconstruction Surveys	<p>If it is determined that special-status wildlife species may occur in a 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 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.</p>
Special-Status Wildlife-3 Seasonal Restrictions During Bird Nesting Season	<p>The MCOSD will implement the following seasonal restrictions to protect nesting birds. If work will occur outside the nesting bird window of February 1 to August 31, surveys and avoidance measures will not be necessary for nesting birds. However, surveys for special-status species may still be necessary if they are present in the area.</p> <ul style="list-style-type: none"> • Identify potential habitat for nesting birds and survey to determine if active nests are present before initiating road and trail management actions. Surveys will include the proposed road and trail management footprint, and a ¼ mile buffer area (for raptors) or a 150 foot buffer area (for other birds). Surveys will be conducted within 14 days of the start of active ground-disturbing activities.

Table 6.3 Special-Status Wildlife Best Management Practices

BMP ID	Description
	<ul style="list-style-type: none"> • If any active nests of protected bird species are found, prohibit brushing, mowing and tree removal activities at the nest site and within a buffer area until the young birds have fledged and left the site, and/or the nest has been abandoned. The buffer area will be 50-250 feet, or as determined through consultation with the California Department of Fish and Wildlife, pursuant to section 2081 of the California Fish and Game Code and the federal Migratory Bird Treaty Act. In general, a line-of-site buffer of at least 150 feet between the nest site and road and trail management activities is recommended. For raptors, buffer distances may be increased to 250 feet or more, depending on the visual distance from the nest to the road and trail management work area, and the sensitivity of the raptor species to road and trail management activities. In addition, a 5 MPH speed limit will be enforced in and near bird nesting habitats and other sensitive habitat areas. • If impacts to nesting birds cannot be avoided, contact the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to obtain the necessary permits before initiating road and trail management activities.
<p>Special-Status Wildlife-4</p> <p>Avoidance and Protection of Northern Spotted Owl</p>	<p>Northern spotted owls have potential to occur on the MCOSD preserves. The MCOSD will undertake the following actions when construction-related road and trail management actions are planned to occur within or adjacent to potential northern spotted owl habitat:</p> <ul style="list-style-type: none"> • Identify potential habitat for the northern spotted owl and survey to determine if it is occupied or if active nests are present before initiating road and trail management activities. Surveys will include the proposed road and trail management footprint and a 150 foot buffer area. Surveys will be conducted within 14 days of the start of active ground-disturbing activities. • To the greatest extent possible, avoid occupied habitat completely during key northern spotted owl breeding and nesting season (March-September). • Mark occupied habitat with flagging or temporary fencing. • Avoid removal of trees with documented northern spotted owl nests. Removal of nest trees typically requires compensatory mitigation. • Establish a buffer of at least 100 feet around occupied habitats. Within the buffer area, select least harmful road and trail management activities. Within the buffer area, retain old-growth forest trees and forest canopy, and minimize removal of other vegetation to the fullest extent possible. • Avoid cutting native trees greater than 10 inches in diameter at breast height within occupied northern spotted owl habitat. • Conduct a worker training program for all field personnel involved with the proposed road and trail management project prior to project initiation. The program will consist of a brief presentation by persons knowledgeable about the northern spotted owl. The program will include the following: a photograph and description of the northern spotted owl, 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 applicable environmental regulations. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). • If impacts cannot be avoided, contact the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife to obtain the necessary permits before initiating road and trail management activities. • Notify the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife within 24 hours of finding any injured northern spotted owl or any unanticipated damage to its habitat associated with the proposed action. Notification must include the date, time, and precise location of the specimen/incident, and any other pertinent information. Dead animals will be sealed in a plastic zip lock bag containing a piece of paper indicating the location, date, and time when it was found, and the name of the person who found it; the bag should be frozen in a freezer in a secure location. The MCOSD will contact the U.S. Fish and Wildlife Service within seven days to transfer any dead or injured specimens.
<p>Special-Status Wildlife-5</p> <p>Avoidance and Protection of Double-Crested Cormorant Nests and Heron and Egret Rookery Sites</p>	<p>There are several known or suspected double-crested cormorant, great blue heron, snowy egret, and black-crowned night heron rookery or nesting sites existing on the MCOSD preserves. These procedures are similar to those described in Special-Status Wildlife Protection-3 for seasonal restrictions during bird nesting season, but are more specific to these particular bird species and therefore supersede the more general practices for protecting all nesting birds. The MCOSD will undertake the following procedures when construction-related road and trail management is planned to occur within or adjacent to potential nesting or rookery sites for these species:</p> <ul style="list-style-type: none"> • Identify potential habitat for double-crested cormorant, heron, and egret nest and rookery sites and survey to determine if they are occupied or if nests are present before initiating road and trail management actions. Surveys will include the proposed road and trail management footprint and a 150-foot buffer area. Surveys will be conducted within 14 days of the start of active ground-disturbing activities. • To the greatest extent possible, avoid nests and rookery sites completely during key breeding and nesting periods. Activities in or near known sites will be limited during the known nesting seasons for each species, or until young have fully fledged. • Establish a buffer of at least 100 feet around rookery and nest sites. Within the buffer area, select least harmful road and trail management activities. Restrict activities within the buffer to those that will not disturb roosting or nesting behavior (e.g., noise and visual disturbances). • Mark occupied habitat with flagging or temporary fencing. • Prohibit the removal of known roost or nest trees. Restrict the removal of other mature riparian trees within the buffer zone.

Table 6.3 Special-Status Wildlife Best Management Practices

BMP ID	Description
	<ul style="list-style-type: none"> • Conduct a worker training program for all field personnel involved with the proposed road and trail management project prior to project initiation. The program will consist of a brief presentation by persons knowledgeable about the special-status species. The program will include the following: a photograph and description of the special-status species, 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 applicable environmental regulations. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). • If impacts cannot be avoided during the nesting season (March 1 – August 31), contact the California Department of Fish and Wildlife to obtain the necessary permits before initiating road and trail management activities. • Notify the California Department of Fish and Wildlife within 24 hours of finding any injured special-status species or any unanticipated damage to its habitat associated with the proposed action. Notification must include the date, time, and precise location of the specimen/incident, and any other pertinent information. Dead animals will be sealed in a plastic zip lock bag containing a piece of paper indicating the location, date, and time when it was found, and the name of the person who found it; the bag should be frozen in a freezer in a secure location. The MCOSD will contact the California Department of Fish and Wildlife within seven days to transfer any dead or injured specimens. • Prohibit or restrict equipment refueling, fluid leakage, equipment maintenance, and road surfacing activities near wetlands. Fuel storage and refueling will occur in safe areas well away from wetlands; safe areas may include paved or cleared roadbeds and other contained areas, such as lined truck beds. Equipment and vehicles will be inspected regularly for hydraulic and oil leaks, and leaking vehicles will not be allowed on the MCOSD preserves. Drip pans will be placed underneath equipment stored on site. Vehicles and construction equipment will be maintained in good working condition, and any necessary on-site servicing of equipment will be conducted away from the wetlands. • Require all contractors to possess, and all vehicles to carry, emergency spill containment materials. Absorbent materials will be on hand at all times to absorb any minor leaks and spills.
<p>Special-Status Wildlife-6</p> <p>Avoidance and Protection of California Clapper Rail, California Black Rail, and Salt Marsh Harvest Mouse</p>	<p>The MCOSD preserves encompass some tidal areas that are known to support, or have the potential to support, California clapper rail, California black rail and salt-marsh harvest mouse. In areas where road and trail management activities are planned to occur within or adjacent to salt marsh or brackish marsh habitats, the MCOSD will first consult with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to determine locations where these species could potentially be affected. The MCOSD will obtain and comply with necessary permits for working in suitable habitat for these species, including, but not limited to the following types of protective actions to prevent harm to these species:</p> <ul style="list-style-type: none"> • To the greatest extent possible, avoid occupied California clapper rail and California black rail habitat completely during key breeding and nesting periods. Noise-generating activities, including operating heavy machinery in or near known California clapper or California black rail sites, will be avoided during the nesting season (March 1 – August 31). • During the California clapper rail and California black rail breeding season, identify potential habitat for California clapper rail and California black rail, and survey to determine if it is occupied before initiating road and trail management activities. Survey will include the proposed road and trail management footprint and a 150-foot buffer area around occupied habitat. Surveys will be conducted within 14 days of the start of active ground- disturbing activities. Occupied habitat will be marked with flagging or temporary fencing. • Assume presence of salt marsh harvest mouse in appropriate habitats, avoid impacting these areas, and establish a protective buffer. Because the U.S. Fish and Wildlife Service frequently does not allow trapping of the salt marsh harvest mouse to determine its presence, the MCOSD will assume presence in appropriate habitats and avoid disturbing them. If appropriate habitats are present, a 200-foot buffer will be established around the habitat. If work is required within the buffer, activities will be restricted within the buffer to those that will not disturb nesting behavior (e.g., through noise or visual disturbances), and vegetation will be removed by hand under the supervision of a qualified biologist to ensure no impacts to the salt marsh harvest mouse occur.
<p>Special-Status Wildlife-7</p> <p>Protection of Fish Habitats</p>	<p>If crossing a stream with the potential to support fish is part of a road or trail project, proper fish passage will be designed:</p> <ul style="list-style-type: none"> • Preference will be for a bridge instead of a culvert, and an open-arch culvert instead of a pipe culvert. A bridge that will not affect streamflow will be the preferred option. If a culvert is necessary, an open-arch design that does not affect the bed or flow of the stream will be preferred. If an open arch culvert is not possible, pipe culverts will be installed slightly below grade in an area perpendicular to the crossing where the existing streamflow is linear. Resting pools will be designed above and below culverts to allow fish to rest before and after having to pass through the culvert.
<p>Special-Status Wildlife-8</p> <p>Worker Awareness Training</p>	<ul style="list-style-type: none"> • Conduct worker awareness training. Worker training will include the following information: a photograph and description of each special-status species, sensitive, resource, or invasive plant known from the project area; a description of its ecology and habitat needs; potentially confusing resources (e.g., similar species or habitats); an explanation of the measures being taken to avoid or reduce adverse impacts; reporting and necessary actions if sensitive resources are encountered; and workers' responsibility under the applicable environmental regulation.

Table 6.3 Special-Status Wildlife Best Management Practices

BMP ID	Description
Special-Status Wildlife-9 Construction Monitoring	If federal- or state-listed wildlife species are known to be present in the project area or immediate surroundings, a qualified biologist will monitor construction activities to ensure impacts to species will be avoided. If listed wildlife species are present within the immediate vicinity of the project area, a more involved monitoring program might be necessary to ensure that these species do not enter the project area. If a listed species is observed by a worker or construction monitor, work will cease immediately and the appropriate resource regulatory agency will be contacted if necessary. A construction monitoring program will be developed for each project on a project-specific basis.
Special-Status Wildlife-10 Relocation of Special-Status Species	If federal- or state-listed wildlife species are located on site, the appropriate resource agency will be contacted, and a qualified biologist possessing any necessary permits will relocate individuals to suitable habitat off site as applicable.
Special-Status Wildlife-11 Noise Control	<ul style="list-style-type: none"> • Utilize the best available noise-control techniques when in proximity to occupied sensitive wildlife habitat. The best available noise-control techniques (e.g., improved mufflers, equipment redesign, and use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will minimize disturbance of nearby wildlife populations
Special-Status Wildlife Protection-12 Trash Control	<ul style="list-style-type: none"> • Store food-related trash in closed containers and remove it from the project site daily. Food-related trash can attract wildlife to construction sites, disrupting their normal behavior patterns.
Special-Status Wildlife-13 Road and Trail Inspections	<ul style="list-style-type: none"> • Regularly inspect road and trail features and associated infrastructure to ensure they are well maintained and posing no threat to surrounding special-status wildlife species. Staff will record information pertaining to the spread of invasive exotic plants that could affect wildlife habitats and to the status and quality of any known special-status wildlife species in the immediate vicinity that could be affected by road or trail use, maintenance, or management activities. Staff will report any findings to MCOSD natural resource staff and make recommended corrective actions if appropriate.

Table 6.4 Special-Status Plants Best Management Practices

BMP ID	Description
Special-Status Plants-1 Literature Reviews	<p>Prior to all management activities, literature reviews will be conducted to determine if special-status plant species, critical habitats, or sensitive communities exist within the project area. In addition to the MCOSD database, the following resources will be reviewed, as necessary, prior to work:</p> <ul style="list-style-type: none"> • U.S. Geological Survey topographic maps • U.S. Fish and Wildlife Service National Wetlands Inventory maps • Bay Area Aquatic Resource Inventory Database • Aerial photographs • California Department of Fish and Wildlife Natural Diversity Database records • U.S. Fish and Wildlife Service quadrangle species lists • California Native Plant Society inventory records <p>Database searches for known occurrences of special-status plant species will focus on the vicinity of the project area. Biological communities present in the project location and surrounding areas will be classified based on existing plant community descriptions described in the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). Biological communities will be classified as sensitive or nonsensitive as defined by the California Environmental Quality Act and other applicable laws and regulations.</p>
Special-Status Plants-2 Avoidance and Protection of Special-Status Plant Species near Road and Trail Management Projects	<p>The MCOSD will undertake the following actions when construction-related road and trail management is planned to occur within or adjacent to special-status plant populations:</p> <ul style="list-style-type: none"> • Identify potential special-status plant habitat and survey to determine if it is occupied before initiating road and trail management activities. Surveys will include the proposed road and trail management footprint and a 100-foot buffer area around the footprint if potential special-status plant habitat exists. Surveys will be conducted within 14 days of the start of active ground-disturbing activities. • To the greatest extent possible, avoid occupied special-status plant populations completely. • If full avoidance is not possible, restrict work to the period when special-status plants have flowered or set seed. • Establish a buffer of at least 100 feet around special-status plant populations. Within the buffer area, select the least harmful road and trail management activities. • Mark special-status plant populations with flagging or temporary fencing. • Prevent unnecessary vehicular and human intrusion into special-status plant species habitat from adjacent construction, maintenance, and decommissioning activities. Where necessary, reroute or sign and fence trails to avoid the special-status plant population.

Table 6.4 Special-Status Plants Best Management Practices

BMP ID	Description
	<ul style="list-style-type: none"> • Prohibit or restrict equipment refueling, fluid leakage, equipment maintenance, and road surfacing activities near special-status plant populations. Activities will be restricted within the buffer to those that will not disturb roosting or nesting behavior (e.g., through noise or visual disturbances). Fuel storage and refueling will occur in safe areas well away from wetlands; safe areas may include paved or cleared roadbeds and other contained areas, such as lined truck beds. Equipment and vehicles will be inspected regularly for hydraulic and oil leaks, and leaking vehicles will not be allowed on the MCOSD preserves. Drip pans will be placed underneath equipment stored on site. Vehicles and construction equipment will be maintained in good working condition, and any necessary on-site servicing of equipment will be conducted away from special-status plant populations. • To minimize downslope erosion and sedimentation near special-status plants, maintain erosion- and sediment-control devices during ground-disturbing activities and until all disturbed soils have been stabilized. Control devices include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion-control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. • Conduct a worker training program for all field personnel involved with the proposed road and trail management project prior to project initiation. The program will consist of a brief presentation by people knowledgeable about the special-status species. The program will include the following: a photograph and description of the special-status species, 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 applicable environmental regulations. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). • If impacts cannot be avoided, contact the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife to obtain the necessary permits before initiating road and trail management activities. Permit conditions will likely require presence of a biological monitor, installation of exclusion fencing, surveys to relocate or avoid the species, and/or possibly timed or staged road and trail management activities that avoid the species or reduce potential for take or harm. • If a special-status plant species is detected during work activities, stop work immediately at that location and contact the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife within two working days. Work will not resume at that location until authorization is obtained from the appropriate agency (unless prior approval has already been granted). • Notify the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife within 24 hours of finding any damaged special-status plant species or any unanticipated damage to plant habitats associated with the proposed action. Notification must include the date, time, and precise location of the specimen/incident, and any other pertinent information. Dead plants should be sealed in a zip lock bag containing a piece of paper indicating the location, date, and time when it was found, and the name of the person who found it; the bag should be frozen in a freezer in a secure location. The MCOSD will contact the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service within two days and transmit the specimen in the appropriate manner. <p>If work occurs during the dry season and is greater than 100 feet from special-status plant species habitat, erosion control and water quality protection measures generally will not be necessary.</p>
Special-Status Plants-3 Ensure Proposed Actions are Consistent with Ongoing Special-Status Plant Management Programs	Some MCOSD preserves (e.g., Ring Mountain and Old Saint Hilary's) have ongoing special-status plant management and monitoring programs. In these locations the MCOSD will ensure that all new proposed road and trail management activities are consistent with the ongoing management of these sites: <ul style="list-style-type: none"> • Review existing management plans and analyze proposed actions for consistency against adopted procedures. • Ensure that new road and trail management projects do not interfere with ongoing management and maintenance activities.
Special-Status Plants-4 Earthwork near Special-Status Plant Populations	Many special-status plants are closely associated with specific soil types or geologic conditions (e.g., serpentine or ultramafic soils). To protect these species, the MCOSD will implement the following practices: <ul style="list-style-type: none"> • Use native soil in all MCOSD road and trail management projects in natural habitat areas. • Do not allow the introduction of incompatible fill near special-status plant populations. Fill will consist of clean, native soils and aggregate materials from other projects within the preserve if available, or it will be purchased from a certified weed-free source before allowing the importation of other materials from outside the preserves. Fill materials will be approved by natural resource staff to ensure compatibility with future restoration/rehabilitation goals. • Salvage, store, and reuse topsoil. Where activities disturb soil temporarily, the top 6 to 12 inches of topsoil will be salvaged to retain seeds, soil mycorrhizae, and fungi from the excavated or otherwise disturbed area. The salvaged topsoil will be reapplied as a topdressing or topcoat over backfill, unless it is known to contain invasive plant seeds or propagules.

Table 6.4 Special-Status Plants Best Management Practices

BMP ID	Description
Special-Status Plants-5 Erosion Potential near Special-Status Plants	<p>The MCOSD will seek to prevent erosion near special-status plants. To protect these species, the MCOSD will:</p> <ul style="list-style-type: none"> • Unless no feasible alternative is available, avoid using heavy equipment in areas with soils that are undisturbed, saturated, or subject to extensive compaction. Where staging of heavy equipment, vehicles, or stockpiles is unavoidable, the allowable disturbance footprint will be limited and marked with flagging or fencing. Following the end of work, surface soils will be scarified to retard runoff and promote rapid revegetation. • Maintain a 15 MPH speed limit in sensitive habitat areas. This will reduce the potential for dust impacts on vegetation. For larger projects, roads will be watered for dust control near sensitive resources. • Immediately rehabilitate areas where project actions have disturbed soil. Areas disturbed by equipment or vehicles will be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion-control materials, revegetating areas with native plants, and removing and monitoring invasive plants. • To minimize erosion and sedimentation, maintain erosion- and sediment-control devices to protect special-status plant populations during ground- disturbing activities and until all disturbed soils have been stabilized. Measures include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds, must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.), and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. If work occurs during the dry season and is more than 100 feet from special- status plant populations, erosion-control and water quality protection measures will not be necessary.
Special-Status Plants-6 Introduction of Invasive and Nonnative Plants and Plant Material	<p>The MCOSD will prevent the introduction of invasive and other nonnative plant material into special-status plant habitats by implementing the following practices:</p> <ul style="list-style-type: none"> • To the extent feasible, use plant seeds, cuttings, and other propagules that are collected from the same area as the project site (usually the same watershed or preserve). Allow collection of no more than 5% of any native plant population to prevent over collecting of wild plant material sources. • To minimize erosion and sedimentation, maintain erosion- and sediment-control devices during ground-disturbing activities and until all disturbed soils have been stabilized. Measures include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Only weed-free materials will be used as erosion- and sediment control devices. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion-control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and not of plastic monofilaments or other materials that could entrap snakes or amphibians. • Do not allow the introduction of incompatible fill near special-status plant populations. Fill will consist of clean, native soils and aggregate materials from other projects within the preserve if available, or it will be purchased from a certified weed-free source before allowing the importation of other materials from outside the preserves. Fill materials will be approved by natural resource staff to ensure compatibility with future restoration/rehabilitation goals. • Segregate and treat soils and vegetation contaminated with invasive plant seeds and propagules. To prevent the spread of invasive plants, treatment of contaminated soils may include disposal on site within already infested areas, chipping or pile burning and mulching to eliminate viable seeds, or disposal at an approved cogeneration plant or green-waste facility. • Clean vehicles of contaminated soil, invasive plant seeds, or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving the preserves. Vehicle-cleaning areas will be established for this purpose. Within the cleaning areas, tires and interior and exterior of vehicles and equipment will be brushed off or hosed down. • Inspect construction equipment for soil or invasive seeds or plant parts. Contractors will be required to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving the preserves.
Special-Status Plants-7 Revegetation with Native, Geographically Appropriate Plant Species	<p>The MCOSD will revegetate areas where construction and ground disturbance has occurred, to promote a species composition and vegetative structure that integrates with the surrounding natural community, to the maximum extent possible. This will be accomplished by implementing the following:</p> <ul style="list-style-type: none"> • Revegetate with annual grasses and forbs. Use of annual grasses and forbs can provide rapid vegetative cover and initial soil stabilization, and erosion control, promote habitat for native species, and provide a more desirable visual cover. • Prepare a project-specific revegetation plan. The MCOSD natural resource staff will develop a revegetation plan for projects as needed. • Wherever possible use locally collected native plant materials from the project footprint and surrounding areas. If possible, plant materials should be collected from within the same watershed or preserve. The MCOSD will allow collection of no more than 5% of any native plant population to prevent overcollection of wild plant material sources. If sufficient local plant materials are not available for collection prior to project activities, geographically appropriate native plant materials will be purchased from a local nursery or seed supplier.

Table 6.4 Special-Status Plants Best Management Practices

BMP ID	Description
Special-Status Plants-8 Worker Awareness Training	The MCOSD will conduct a worker awareness training for all field personnel involved with proposed road and trail management activities prior to initiating the project. The program will include the following: <ul style="list-style-type: none"> • a photograph and description of each special-status species, sensitive resource, or invasive plant known from the project area • a description of its ecology and habitat needs • potentially confusing resources (e.g., similar species or habitats) • an explanation of the measures being taken to avoid or reduce adverse impacts • reporting and necessary actions if sensitive resources are encountered • workers' responsibility under the applicable environmental regulation
Special-Status Plants-9 Relocation of Special-Status Plants	If special-status species are located in the project area and impacts to these species are unavoidable, plants and/or propagules will be relocated to suitable habitat off site prior to the commencement of construction or management activities. Alternatively, off-site mitigation for impacts could be considered. If special-status wildlife species are located on site, the appropriate resource agency will be contacted, and a qualified biologist possessing any necessary permits will relocate individuals to suitable habitat off site as applicable.
Special-Status Plants-10 Road and Trail Inspections	<ul style="list-style-type: none"> • Regularly inspect road and trail features and associated infrastructure to ensure they are well maintained and posing no threat to surrounding special-status plant resources. Staff will record information pertaining to the spread of invasive, exotic plants that could affect special-status plant habitats and to the status and quality of any known special-status plant populations in the immediate vicinity that could be affected by road or trail use, maintenance, or management activities. Staff will report any findings and make recommended corrective actions if appropriate.
Special-Status Plants-11 Reuse and Replanting of Native Trees and Shrubs	<ul style="list-style-type: none"> • Where feasible, replant excavated trees and shrubs, removed from unstable fill slopes and cut banks, on graded contours to restore the areas with native vegetation and promote native plant habitat. These plants will represent the most locally appropriate materials for restoration and conform to the vegetation types of the surroundings.
Special-Status Plants-12 Ripping and Recontouring Roads	<ul style="list-style-type: none"> • Rip and decompact road and trail surfaces where appropriate. Ripping surfaces provides a more suitable substrate for recolonization or revegetation by native plant materials. Decommissioned road and trail surfaces will be recontoured and sloped away from wetlands and water bodies to prevent the potential for erosion into these features. Any shoulders, ditches, or embankments will also be removed, and the area graded to a natural contour.

Table 6.5 Invasive Plants Best Management Practices

BMP ID	Description
Invasive Plants-1 Compliance with Integrated Pest Management Ordinance	All herbicide use will be administered under Marin County's Integrated Pest Management (IPM) Ordinance, and work will only be conducted under the supervision of a certified pest control applicator. All herbicide use for vegetation management actions will be posted and reported consistent with the ordinance.
Invasive Plants-2 Herbicide Use near Sensitive Natural Resources	<ul style="list-style-type: none"> • Limit herbicide use within 100 feet of sensitive natural resources. Hand control, mechanical control, and cultural control will be used wherever possible to minimize the use of herbicides near sensitive resources.
Invasive Plants-3 Survey and Control of Invasive Plants in Project Footprint	<ul style="list-style-type: none"> • Before ground-disturbing activities begin, inventory and prioritize invasive plant infestations for treatment within the project footprint and along access routes. Controlling priority invasive plant infestations at least a year prior to the planned disturbance, if feasible, will minimize invasive plant seeds in the soil. • Where feasible, survey the road shoulders of access routes for invasive plant species and remove priority invasive plants that could be disturbed by passing vehicles. • Avoid establishing staging areas in areas dominated by invasive plants. If populations of priority invasive plants occur within or near staging areas, their perimeters will be flagged so that vehicle and foot traffic can avoid them. • Clean vehicles of contaminated soil, invasive plant seeds, or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving the preserves. Vehicle-cleaning areas will be established for this purpose. Within the cleaning areas, tires and the insides and outsides of vehicles and equipment will be brushed off or hosed down. • Inspect construction equipment for soil or invasive seeds or plant parts. Contractors will be required to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving the preserves.
Invasive Plants-4 Limited Soil Disturbance	<p>Soil disturbance during road and trail projects will be minimized to reduce the potential for introduction or spread of invasive plant species, to protect topsoil resources and to reduce available habitat for new invasive plant species:</p> <ul style="list-style-type: none"> • Plan all road and trail management activities to disturb as little area as possible.
Invasive Plants-5 Cleaning of Heavy Equipment, Maintenance Tools, and Fire Management Vehicles	<p>The MCOSD will implement the following procedures when working in or near infested areas:</p> <ul style="list-style-type: none"> • Clean vehicles of contaminated soil, invasive plant seeds, or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving the preserves. Vehicle-cleaning areas will be established for this purpose. Within the cleaning areas, tires and the insides and outsides of vehicles and equipment will be brushed off or hosed down. • Inspect construction equipment for soil or invasive seeds or plant parts. Contractors will be required to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving the preserves.
Invasive Plants-6 Reducing Potential for Establishment of Invasive Plants on Disturbed Soil Surfaces	<p>To minimize the establishment of invasive species in disturbed soil areas, the MCOSD will implement one or more of the following actions:</p> <ul style="list-style-type: none"> • To minimize erosion and sedimentation, maintain erosion- and sediment-control devices during ground-disturbing activities and until all disturbed soils have been stabilized. Control devices include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion-control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles, etc.) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. • Do not allow the introduction of incompatible fill. Fill will consist of clean, native soils and aggregate materials from other projects within the preserve if available, or it will be purchased from a certified weed-free source before allowing the importation of other materials from outside the preserves. Fill materials will be approved by natural resource staff to ensure compatibility with future restoration/rehabilitation goals. • Segregate and treat soils and vegetation contaminated with invasive plant seeds and propagules. To prevent the spread of invasive plants, treatment of contaminated soils may include disposal on site within already infested areas, chipping or pile burning and mulching to eliminate viable seeds, or disposal at an approved cogeneration plant or green-waste facility.
Invasive Plant Management-7 Monitor and Control of Invasive Plants in Road and Trail Management Work Areas	<ul style="list-style-type: none"> • Periodically monitor areas subject to road and trail management activities for a minimum of three years following project completion for the presence of invasive plant species. If invasive plants threaten to become established or spread as a result of project activities, they will be treated in conformance with the Vegetation and Biodiversity Management Plan.

Table 6.5 Invasive Plants Best Management Practices

BMP ID	Description
Invasive Plant Management-8 Protection of Streambanks and Water Quality During Invasive Plant Removal	<ul style="list-style-type: none"> • Install approved erosion-control devices following the removal of invasive plants from streambanks to prevent sediment movement into watercourses and to protect bank stability. The MCOSD will obtain and comply with necessary wetland permits and integrated pest management procedures related to work in and near wetlands. Where appropriate, the MCOSD will also seek guidance from a fisheries biologist regarding the amount of material permissible to remove from stream corridors when controlling large patches of invasive plants, so as to prevent changes in water temperature and quality. If work occurs during the dry season near seasonally wet areas, erosion-control and water quality protection measures generally will not be necessary.
Invasive Plant Management-9 Road and Trail Inspections	<ul style="list-style-type: none"> • Regularly inspect road and trail features and associated infrastructure to ensure they are well maintained and posing no threat to surrounding sensitive biological resources. Inspectors will record information pertaining to invasive exotic plant populations and new infestations that may be threatening sensitive species and habitats. Inspectors will report any findings and make recommended corrective actions if appropriate.
Invasive Plant Management-10 Monitoring Decommissioned Areas	<ul style="list-style-type: none"> • Monitor areas of decommissioned roads and trails for the presence of invasive plant species for two years following decommissioning to ensure no infestations develop. If invasive species are detected at this time, corrective actions will be taken as appropriate.

Table 6.6 Construction Contracts Best Management Practices

BMP ID	Description
Construction Contracts -1 Standard Procedures in Construction Contracts	<p>When using contractors to perform road and trail management, the MCOSD will include some or all of the following standard procedures into construction contracts.</p> <p>Time of work. The contractor will work with the MCOSD natural resource staff to determine the optimal timing of contracted work. Many timing restrictions relate to avoiding migration, gestation, or flowering periods for special-status species. Other types of timing restrictions relate to avoiding the spread of invasive plants or scheduling work in wetlands during the dry season.</p> <p>Work in and near water bodies and wetlands. To protect water quality, the contractor will be required to prepare and implement a stormwater pollution prevention plan for road and trail management work in or near wetlands, ponds, seeps, creeks, tidal areas, or stream crossings. The following practices will be followed to protect these habitats:</p> <ul style="list-style-type: none"> • Avoid construction work within a buffer of 100 feet from the ordinary high-water mark of any water body, wetland, or tidally influenced area. If construction work cannot be fully avoided in water bodies, wetlands and riparian areas, the appropriate state and federal agencies will be consulted and permits obtained. • Within the buffer, restrict activities to the least-harmful methods. For example, herbicides will be restricted to those that are EPA-approved for use near water. Activities that disturb soil or could cause soil erosion or changes in water quality will be prohibited. • Within the buffer, limit work that may cause erosion to low-flow periods. Low-flow months for local creeks are typically August to October. For tidal areas, work will not occur within two hours of high-tide events at construction sites when high tide is greater than 6.5 feet as measured at the Golden Gate Bridge, using corrections for areas near individual MCOSD preserves. Tide charts are available online from the National Oceanic and Atmospheric Agency/National Weather Service (http://www.wrh.noaa.gov/mtr/sunset.php). <p>Work in and near invasive plant infestations. The contractor will work with the MCOSD natural resource staff to identify any priority invasive plants that occur near the project work area, including the project footprint, access roads, staging areas, and similar work areas. The contractor will agree to comply with requirements to reduce the spread or transport of priority invasive plants related to construction activities. Requirements may include some or all of the following:</p> <ul style="list-style-type: none"> • Conduct a training program for all field personnel involved with the proposed road and trail management project prior to initiating the project. The program will consist of a brief presentation by persons knowledgeable about the special-status species, sensitive resource, or invasive plants known from the project area. The program will include the following: a photograph and description of each special-status species, sensitive resource, or invasive plant known from the project area; a description of its ecology and habitat needs; an explanation of the measures being taken to avoid or reduce adverse impact; and the workers' responsibility under the applicable environmental regulation. The worker training may be conducted in an informal manner (e.g., as part of a routine tailgate safety meeting). • Restrict work to periods when invasive plants are not in fruit or flower. • Clean vehicles of contaminated soil, invasive plant seeds, or plant parts before entering the MCOSD preserves, whenever moving equipment between areas within the preserves, and before leaving the preserves. Vehicle-cleaning areas will be established for this purpose. Within the cleaning areas, tires and insides and outsides of vehicles and equipment will be brushed off or hosed down.

Table 6.6 Construction Contracts Best Management Practices

BMP ID	Description
	<ul style="list-style-type: none"> • Inspect construction equipment for soil or invasive seeds or plant parts. Contractors will be required to make equipment available for inspection before entering the MCOSD preserves, when moving between sites within the preserves, and before leaving the preserves. • Dispose of green waste in a manner that does not spread invasive plants. Disposal practices may include on-site disposal in an already infested area or off-site disposal in a cogeneration plant or an approved green-waste composting facility. <p>Work in environmentally sensitive areas. The MCOSD natural resource staff will identify any environmentally sensitive areas in or near construction projects prior to the start of the project. The following practices will be followed to protect these resources: Environmentally sensitive areas may include special-status plant or wildlife species or their habitats; wetlands; creeks, streams, and related riparian areas; and sensitive vegetation types as described in this report.</p> <ul style="list-style-type: none"> • Avoid work in environmentally sensitive areas. If work cannot be fully avoided, any applicable regulatory agencies will be consulted and the necessary permits obtained. • Use locally collected plant materials for revegetation projects. Whenever possible, locally collected native plant materials from the project footprint and surrounding area will be used for revegetation. Plant materials should be collected from within the same watershed or the MCOSD preserve if possible. The MCOSD will allow collection of no more than 5% of any native plant population to avoid overcollection of wild plant material sources. If sufficient local plant materials are not available for collection prior to project activities, geographically appropriate native plant materials will be purchased from a local nursery or seed supplier. The contractor will allow the MCOSD to inspect and approve all plant materials and seed prior to use on site. • Comply with requirements of the MCOSD project permits to protect special-status species and their associated habitats. For road and trail management work in or near special-status species habitat, the contractor is required to comply with requirements of the MCOSD project permits to protect special-status species and their associated habitats before and during construction, and to cooperate with the MCOSD in implementing any state and federal permits and agreements for the project. The special-status species population plus a buffer will be designated as an environmentally sensitive area using lath and flagging, pin flags, or temporary fencing (depending on resource sensitivity to work). The contractor will be required to avoid all designated environmentally sensitive areas during construction. For any special-status species or their habitats that cannot be fully avoided, the contractor will work with the MCOSD to obtain and comply with federal and state Endangered Species Acts, the federal Migratory Bird Treaty Act, and the California Fish and Game Code permits and agreements. • Restrict soil disturbance and import of nonnative soil or fill material. To reduce the potential for damage of native plants and/or introduction of invasive plants, the contractor will be required to minimize the footprint of soil disturbance to the minimum amount necessary to complete the contracted work. This includes the footprint of access roads, staging areas, and areas of temporary disturbance. The contractor and its staff and subcontractors will agree not to drive off road or drive or park on native vegetation unless approved in advance by the MCOSD natural resource staff. The contractor will agree that if soil excavation is required, every attempt will be made to have a balanced cut-and-fill project that reuses all native soils on site. Nonnative soil or fill material will not be used unless preapproved by the MCOSD natural resource staff. • To minimize erosion and sedimentation, maintain erosion- and sediment-control devices during ground-disturbing activities and until all disturbed soils have been stabilized. Control devices include rice straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials will be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion-control materials will be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians. <p>Other procedures:</p> <ul style="list-style-type: none"> • Keep all entry gates to the project site locked during nonconstruction hours, or locked at all times if not needed for construction access. • Equip all vehicles with a suitable fire extinguisher. • Immediately rehabilitate areas where project actions have disturbed soil. Areas disturbed by equipment or vehicles will be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion-control materials, revegetating areas with native plants, and removing and monitoring invasive plants.

Cultural Resources

Table 6.7 Cultural Resources Best Management Practices

BMP ID	Description
Cultural Resources-1 Historical and Archaeological Resource Mapping	Prior to constructing any project that would involve ground disturbance outside road or trail beds or other areas previously disturbed when constructing the road and trail system, the MCOSD staff will determine whether or not the project area is located within an area that is mapped as “historically or archaeologically sensitive” according to map 4-1 (Historical Resources) in the Marin Countywide Plan and/or identified as culturally sensitive on other confidential maps on file with the county that list prehistoric or archeological sites. If the project area is identified as sensitive on any of these maps, the site will be field surveyed by a state-qualified archeologist or an archeological consultant recommended by the Federated Indians of Graton Rancheria, who will make recommendations and develop proposals for any procedures deemed appropriate to further investigate and/or mitigate adverse impacts to those resources.
Cultural Resources-2 Consultation with Northwest Information Center	Prior to constructing any project that would involve ground disturbance outside road or trail beds or other areas previously disturbed when constructing the road and trail system, the MCOSD staff will contact the Northwest Information Center of the California Historical Resources Information System and request a records search of known historic and cultural resources within and adjacent to the proposed project area, and seek the determination of the information center coordinator regarding the potential for cultural resources on the site. Should the records request or the recommendation of the coordinator indicate the presence of sensitive resources, the site will be field surveyed by a state-qualified archeologist or archeological consultant recommended by the Federated Indians of Graton Rancheria, who will make recommendations and develop proposals for any procedures deemed appropriate to further investigate and/or mitigate adverse impacts to those resources.
Cultural Resources-3 Tribal Consultation	The following tribal consultations will be conducted prior to any new ground disturbance related to road or trail construction: <ul style="list-style-type: none"> • Send the road and trail project description information to the Native American Heritage Commission and request contact information for tribes with traditional lands or places located within the geographic areas affected by the proposed changes. • Contact each tribe identified by the commission in writing and provide them the opportunity to consult about the proposed project. • Organize a consultation with tribes that respond to the written notice within 90 days. • Refer proposals associated with proposed road and trail modifications to each tribe identified by the commission at least 45 days prior to the proposed action. • Provide notice of a public hearing at least 10 days in advance to tribes and any other persons who have requested that such notice be provided.
Cultural Resources-4 Alteration of Historic Structures	<ul style="list-style-type: none"> • Limit the modification of ranch structures or other historical features to maintain the aesthetic quality, historical setting, and rural character of the preserves.
Cultural Resources-5 Permanent Protection	<ul style="list-style-type: none"> • Where road and trail activities cannot avoid sensitive cultural resources, require modifications to the actions to incorporate the resource and include a resource protection plan for its maintenance and future protection.
Cultural Resources-6 Construction Discovery Protocol	<ul style="list-style-type: none"> • If cultural resources are discovered on a site during construction activities, halt all earthmoving activity in the area of impact until a qualified archeological consultant examines the findings, assesses their significance, and develops proposals for any procedures deemed appropriate to further investigate and/or mitigate adverse impacts to those resources.
Cultural Resources-7 Human Remains	<ul style="list-style-type: none"> • In the event that human skeletal remains are discovered, discontinue work in the area of the discovery and contact the County Coroner. If skeletal remains are found to be prehistoric Native American remains, the coroner will call the Native American Heritage Commission within 24 hours. The commission will identify the person(s) it believes to be the most likely descendant of the deceased Native American. The most likely descendant will be responsible for recommending the disposition and treatment of the remains. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation/grading work for means of treating or disposing of the human remains and any associated grave goods as provided in section 5097.98 of the California Public Resources Code.
Cultural Resources-8 Community Awareness	<ul style="list-style-type: none"> • Increase public awareness of local history and archeology, and the need to protect cultural resources. This may be accomplished by highlighting cultural resources along a road or trail with interpretive signs and information kiosks, and/or by placing a historical marker along the road or trail segment to inform trail users about the importance of the site and/or event.

Water Quality

Table 6.8 Water Quality Best Management Practices

BMP ID	Description
<p>Water Quality-1</p> <p>Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas</p>	<p>Road and trail management activities will be restricted near wetlands and other waters to reduce the potential for sediment or pollutants to enter water bodies or wetlands. If work occurs during the dry season and is greater than 100 feet from creeks and wetlands, erosion control and water quality protection measures will not be necessary.</p> <ul style="list-style-type: none"> • If possible, avoid work around water bodies, wetlands, and tidally influenced areas, including a buffer area of 100 feet around these areas (i.e., as measured from the top bank of creeks, streams, or ponds). • If construction work in wetlands, riparian areas, or tidally influenced areas cannot be fully avoided, consult with the appropriate state and federal agencies. This consultation may result in wetland delineation, permit applications, and mitigation that meets Countywide Plan and other regulatory requirements. • Within the 100 foot buffer, limit construction activities. Limit activities to least-harmful methods; restrict herbicides to those that are EPA-approved for use near water. Prohibit activities that disturb soil or could cause soil erosion or changes in water quality. • Within the 100 foot buffer, limit work that might cause erosion to low-flow or low-tide periods. Low-flow months for local creeks are typically August to October. For tidal areas, work will not occur within two hours of high-tide events at construction sites when high tide is greater than 6.5 feet as measured at the Golden Gate Bridge, using corrections for areas near individual MCOSD preserves. Tide charts are available online from the National Oceanic and Atmospheric Agency/National Weather Service (http://www.wrh.noaa.gov/mtr/sunset.php). • Within the 100 foot buffer, minimize erosion and sedimentation by maintaining erosion- and sediment-control devices during ground-disturbing activities and until all disturbed soils have been stabilized. Control devices include weed-free straw, hydromulch, geofabrics, wattles, sediment traps, check dams, drainage swales, and sand bag dikes. Materials must be certified weed-free to prevent the introduction of wheat, barley, and other nonnative plant seeds. Erosion-control materials must be constructed of natural fibers (e.g., coconut fiber mats, burlap and rice straw wattles) and may not be constructed with plastic monofilaments or other materials that could entrap snakes or amphibians.
<p>Water Quality-2</p> <p>Temporary Erosion and Sediment Control</p>	<p>Temporary sediment-control practices will be implemented when new trail construction or existing trail improvements will result in greater than 1 acre of disturbance. Temporary practices may also be required when disturbance is less than 1 acre but close to a sensitive resource or has the potential to discharge a significant amount of sediments or pollutants to surface water. Several of the listed temporary practices can also be used as postconstruction stabilization measures: Information and standard details for temporary erosion-control BMPs can be found in the California Stormwater BMP Handbook – Construction (CASQA 2009).</p> <ul style="list-style-type: none"> • Install temporary fencing around staging areas and along limits of construction when work areas are immediately adjacent to sensitive resources. This will limit the disturbance footprint and help protect resources, including native vegetation, wetlands, and streams, during grading operations. • Install linear sediment barriers to slow and filter stormwater runoff from disturbed areas. Fiber or straw roll barriers can also be spaced along the contours of a disturbed area after construction to prevent concentrated flow and stabilize the area until there is sufficient vegetation coverage. • Apply one or more of the following to restore or protect areas disturbed by excavation or grading operations: <ul style="list-style-type: none"> » tilling (minimum 6 inch depth) and seeding » hydromulch and tackifier » planting » straw or wood mulch
	<ul style="list-style-type: none"> » coir (jute) netting » biodegradable erosion-control blankets » plastic sheeting (only as an interim protection during storm events when construction site is still active) <ul style="list-style-type: none"> • Cover soil and loose material stockpiles with weighted plastic sheeting when inactive or prior to storm events. Active and inactive material stockpiles will be encircled at all times with a linear sediment barrier. • Manage sediment when diverting streamflow. When constructing trail or road stream crossings, a temporary clear-water diversion may be required. The following options will be considered for isolating the work area and protecting resources when diverting streamflow via gravity-fed flexible pipe or active pumping around the work area: sand or gravel bag coffer dam enclosed in plastic sheeting, water-filled dam (e.g., Aquadam), sheet piling, and turbidity curtains. • Manage sediment during dewatering operations. The following options will be considered for applying or containing and treating sediment-laden water produced during dewatering operations: sprinkler system to open area (as long as there is no visible surface runoff), temporary constructed sediment basin or trap, rented sedimentation tank (e.g., Baker Tank).

Table 6.8 Water Quality Best Management Practices

BMP ID	Description																		
Water Quality-3 Erosion Control Measures	<ul style="list-style-type: none"> • Avoid the use of heavy equipment in areas with soils that are undisturbed, saturated, or subject to extensive compaction. • If no feasible alternative is available and staging of heavy equipment, vehicles, or stockpiles is unavoidable, limit the disturbance footprint and flag or mark the allowable disturbance area in the field. Following the end of work, newly disturbed soils will be scarified to retard runoff and promote rapid revegetation. • Immediately rehabilitate areas where project actions have disturbed soil. Require areas disturbed by equipment or vehicles to be rehabilitated as quickly as possible to prevent erosion, discourage the colonization of invasive plants, and address soil compaction. Techniques include decompacting and aerating soils, recontouring soils to natural topography, stabilizing soils via erosion-control materials, revegetating areas with native plants, and removing and monitoring invasive plants. • Leave the roots of target invasive trees and shrubs in place in areas with highly erosive soils or steep slopes. Stumps may be cut or ground down to the ground level. <p>If work occurs during the dry season and is greater than 100 feet from water bodies and wetlands, erosion control and water quality protection measures will not be necessary.</p>																		
Water Quality-4 Preventing or Reducing the Potential for Pollution	<ul style="list-style-type: none"> • Include spill prevention and clean-up in annual staff training sessions. • Properly use, store, and dispose of chemicals, fuels, and other toxic materials according to manufacturer's specifications and agency regulations. • Prohibit or restrict equipment refueling, fluid leakage, equipment maintenance, and road surfacing activities near wetlands. Fuel storage and refueling will occur in safe areas well away from wetlands; safe areas may include paved or cleared roadbeds and other contained areas, such as lined truck beds. Equipment and vehicles will be inspected regularly for hydraulic and oil leaks, and leaking vehicles will not be allowed on the MCOSD preserves. Drip pans will be placed underneath equipment stored on site. Vehicles and construction equipment will be maintained in good working condition, and any necessary on-site servicing of equipment will be conducted away from the wetlands. • Require all contractors to possess, and all vehicles to carry, emergency spill containment materials. Absorbent materials will be on hand at all times to absorb any minor leaks and spills. 																		
Water Quality-5 Road and Trail Inspections	<ul style="list-style-type: none"> • Inspect roads and trails for conditions that might adversely affect water quality or other resources. Road and trail maintenance staff will use road/trail inspection forms to facilitate complete and consistent data capture and reporting of the following conditions: <ul style="list-style-type: none"> » concentrated flows on roads and trails that cause erosion, rilling, or gullyng » runoff and effects to water quality of nearby habitats » the spread of invasive exotic plants near wetlands and waters » the status and quality of any known sensitive resources in the immediate vicinity that could be affected by road or trail use and/or maintenance <p>Staff will report any findings and make recommended corrective actions if appropriate.</p>																		
Water Quality-6 Grading Windows	<ul style="list-style-type: none"> • Restrict grading activity to the dry months (generally May 15 – October 15), when associated erosion will be reduced to the maximum extent possible. 																		
Water Quality-7 Culvert Inspection	<ul style="list-style-type: none"> • Inspect culverts on a regular basis. Inspections will ensure that culverts do not clog with sediment or debris. Blocked culverts may affect water quality, change the water course, increase erosion or sediment runoff, or affect wildlife. Any materials blocking culverts will be removed and disposed of outside of the watercourse in an area not subject to erosion. If a significant blockage or sedimentation exists, the MCOSD will plan and implement corrective actions as necessary. Excavation of sediments within streams may require a maintenance permit from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and/or the San Francisco Water Quality Control Board. 																		
Water Quality-8 Proper Disposal of Excess Materials	<ul style="list-style-type: none"> • Avoid resource impacts when disposing of materials. Any excess material related to new construction, maintenance, or decommissioning (including soils, debris, trash, or other materials that need to be removed as part of management activities) will be disposed of at an appropriate site where materials could not impact sensitive resources. For example, grading-related excess soils or removed debris will not be placed in or around a water body or wetland, where the materials could be subject to erosion that would affect water quality. 																		
Water Quality-9 Sidcasting Construction Material	<ul style="list-style-type: none"> • Avoid sidcasting, or at a minimum contain and remove sidcast material when it has the potential to reach surface waters. The following "rules of thumb" based on Fishnet 4C Guidelines (2007) will be used as guidance: <table border="1" data-bbox="479 1730 1101 1892" style="margin-left: 20px; width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Slope gradient</th> <th style="text-align: left;">Distance to watercourse</th> <th style="text-align: left;">Sidcast rule</th> </tr> </thead> <tbody> <tr> <td>Any slope</td> <td>Will likely enter watercourse</td> <td>Not allowed</td> </tr> <tr> <td>≤20%</td> <td>≥150 feet</td> <td>Allowed</td> </tr> <tr> <td>≤50%</td> <td>≥300 feet</td> <td>Allowed</td> </tr> <tr> <td>> 50%</td> <td>Long vegetated slope</td> <td>Allowed</td> </tr> <tr> <td>>50%</td> <td>Shorter, sparsely vegetated slope</td> <td>Not allowed</td> </tr> </tbody> </table> 	Slope gradient	Distance to watercourse	Sidcast rule	Any slope	Will likely enter watercourse	Not allowed	≤20%	≥150 feet	Allowed	≤50%	≥300 feet	Allowed	> 50%	Long vegetated slope	Allowed	>50%	Shorter, sparsely vegetated slope	Not allowed
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Geologic Hazards

Table 6.9 Geologic Hazards Best Management Practices

BMP ID	Description
Geologic Hazards-1 Assessment and Requirements in Areas of Potential Geologic Hazard	Given the unique and potentially high risks associated with geologic hazards, general best management practices for these types of potential impacts are not appropriate. Instead, when new trails or trail improvements are proposed in preserve areas with a propensity for geologic instabilities, including slides or debris flows in the more elevated areas and subsidence or liquefaction in the low-lying areas, a site assessment will be conducted by a certified geologist or geotechnical engineer. If geologic hazards are confirmed in the area, the site assessment will propose adequate avoidance measures or engineering elements to ensure trail and infrastructure stability and maintained public safety.
Geologic Hazards-2 Construction in Areas of Slides and Debris Flows	<ul style="list-style-type: none"> • In areas of identified slide and debris flow hazards, locate and design new trails, drainage improvements, or irrigation so as not to alter the shape or stability, or change the drainage or groundwater conditions, of an existing slide area. Such alterations would potentially result in reactivation or further destabilization of the slope.
Geologic Hazards-3 Construction in Areas of Erodible and Expansive Soils	<ul style="list-style-type: none"> • Use avoidance tactics or engineered grading to mitigate adverse geologic conditions and potential hazards. Prior to final road or trail project design, consult with engineering geologists and/or geotechnical engineers to identify and implement mitigating road or trail designs for new facility locations or when improving existing facilities.
Geologic Hazards-4 Construction in Areas of Collapsible Soils	<ul style="list-style-type: none"> • In any of the lower elevation preserves (i.e., those near sea level) assess soil type and the potential for subsidence to determine optimum trail location and structural foundations necessary to avoid collapsible soils. In consultation with a certified geologist or geotechnical engineer, design roads and trails to avoid or reduce this potential hazard through optimizing location or by implementing appropriate engineering designs.

Air Quality

Table 6.10 Air Quality Best Management Practices

BMP ID	Description
Air Quality-1 Implement BAAQMD Measures	As part of the review process required under the California Environmental Quality Act, the MCOSD will use the current Bay Area Air Quality Management District guidelines to evaluate the significance of air quality impacts from road and trail management plans and projects, and to establish appropriate mitigation requirements.
Air Quality-2 Minimize Dust Control Emissions during Construction	<p>The MCOSD will require its staff or contractors to implement appropriate Bay Area Air Quality Management District control measures for emissions of dust during construction of all road and trail modifications and improvements.</p> <p>The following basic control measures cover routine operation and maintenance and day-to-day upkeep of roads and trails, minor road and trail reconstruction, and minor decommissioning activities, they also cover changes in use, the conversion of a road to a trail, or any proposed action that does not involve construction activities, but an increase or decrease in the level of activity:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (vertical space between the top surface of the material and the top of the hauling container). • Pave, apply water three times daily, or apply nontoxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
Air Quality-3 Enhanced Dust Control during Construction	<p>The following enhanced control measures cover major road and trail reconstruction, rerouting, and decommissioning activities, such as repairing, replacing, or restoring heavily used and wide road and trail segments; they also cover resurfacing, replacing, and restoring trailhead areas and installing new water quality and drainage features:</p> <ul style="list-style-type: none"> • Hydroseed or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.). • Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion-control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible.

Table 6.10 Air Quality Best Management Practices

BMP ID	Description
Air Quality-4 Dust Control during Construction in Sensitive Resource Areas	The MCOSD will require its staff or contractors to implement appropriate Bay Area Air Quality Management District optional control measures for emissions of dust during construction of all road and trail modifications and improvements that are large in area, located near sensitive resources, or which for any other reason may warrant additional emission reductions. The following measures cover rerouting road and trail alignments, significant decommissioning or restoration activities, and the construction of a new road and trail alignment on undisturbed land to connect previously unconnected points: <ul style="list-style-type: none"> • Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. • Install wind breaks, or plant trees/vegetative wind breaks, at windward side(s) of construction areas. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 miles per hour. • Limit the area subject to excavation, grading, and other construction activity at any one time.

Noise

Table 6.11 Construction Noise Best Management Practices

BMP ID	Description
Noise-1 County Noise Ordinance Requirements	<ul style="list-style-type: none"> • For all maintenance and construction projects using powered or heavy equipment, implement the day and time restrictions for equipment operation and maintenance specified by Marin County Ordinance 3431, Construction Noise.
Noise-2 Noise Control during Construction within and adjacent to Sensitive Wildlife Populations	<ul style="list-style-type: none"> • Ensure that equipment and vehicles utilize the best available noise-control techniques (e.g., improved mufflers, equipment redesign, and use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) to prevent disturbance of nearby wildlife populations. • Except for emergency projects, prohibit nighttime operations or planned operations during breeding season in areas adjacent to sensitive wildlife populations.

**APPENDIX B
DRAFT VEGETATION AND BIODIVERSITY MANAGEMENT PLAN
SUMMARY OF PRESERVE CONDITIONS**

Table 2.1 Summary of Preserve Conditions

Preserve Name, Size, and Perimeter	Sensitive Natural Resources	Known Special-Status and Locally Rare Species	Management Challenges	History and Local Setting	Vegetation Management, Maintenance and Stewardship	Comments
<p>French Ranch</p> <p>Area = 402.6 acres Perimeter = 5.2 miles</p>	<p>Sensitive Vegetation Type(s):</p> <ul style="list-style-type: none"> • Chamise, eastwood manzanita (G2) • Chamise-serpentine chaparral (S) • Eastwood manzanita alliance (S) • Madrone, California bay, tanoak (S) • Mesic trending chaparral (S) • Mt. Tamalpais manzanita-chamise (G2) • Poison oak alliance (F) • Rocky serpentine grasses (S) • Upland serpentine grassland (G2) <p>Wetlands:</p> <ul style="list-style-type: none"> • Clear Creek • Riparian woodlands 	<p>Special-Status Plants:</p> <ul style="list-style-type: none"> • <i>Arctostaphylos montana</i> (Mt. Tamalpais manzanita), C • <i>Eriogonum luteolum</i> var. <i>caninum</i> (Tiburon buckwheat), C • <i>Lessingia micradenia</i> var. <i>micradenia</i> (Mt. Tamalpais lessingia), C <p>Special-Status Wildlife:</p> <ul style="list-style-type: none"> • <i>Strix occidentalis caurina</i> (northern spotted owl) nesting buffer, C • <i>Accipiter cooperi</i> (Cooper's hawk), C • <i>Accipiter striatus</i> (sharp-shinned hawk), C • <i>Contopus cooperi</i> (olive-sided flycatcher), C • <i>Elanus leucurus</i> (white-tailed kite), C • <i>Ammodramus savannarum</i> (grasshopper sparrow), C • <i>Antrozous pallidus</i> (pallid bat), R • <i>Taxidea taxus</i> (American badger), R <p>Locally Rare Species:</p> <ul style="list-style-type: none"> • <i>Aspidotis californica</i> (California lace fern), C • <i>Calamagrostis ophitidis</i> (serpentine reed grass), C • <i>Leptosiphon acicularis</i> (bristly linanthus), C • <i>Sellaginella wallacei</i> (Wallace spike-moss, southern range limit is in Marin), C • <i>Toxicoscordion fontanum</i> (marsh zigadenus), C 	<p>Dead vegetation from California oak mortality syndrome is prevalent in Douglas-fir-California bay vegetation.</p> <p>Important invasive plants include:</p> <ul style="list-style-type: none"> • <i>Cytisus scoparius</i> (Scotch broom) 		<p>Broom removal prompted by removal of broom on neighboring property. Starting in 2008, annual cost has been 1K/year with 2K spent to date.</p>	
<p>Gary Giacomini</p> <p>Area = 1499.83 acres Perimeter = 20.6 miles</p>	<p>Sensitive Vegetation Type(s):</p> <ul style="list-style-type: none"> • Bishop pine/eastwood manzanita (G2) • California bay, canyon oak (F) • California bay, tanoak (F) • California bay, alder, big leaf maple, willow riparian forest (S) • Canyon oak alliance (F) • Chamise, eastwood manzanita (G2) • Chamise-serpentine chaparral (S) • Coast live oak, douglas-fir (F) • Coyote brush alliance (F) • Douglas-fir, tanoak (F) • Douglas-fir (pure) (F) • Douglas-fir, California bay/interior live oak (F) • Eastwood manzanita alliance (S) • Giant chinquapin alliance (F) • Interior live oak alliance (F) • Interior live oak- eastwood manzanita (S) • Madrone alliance (S) • Madrone, California bay, tanoak (S) • Mesic trending chaparral (F) • Mt. Tamalpais manzanita alliance (G2) • Mt. Tamalpais manzanita-chamise (G2) • Mt. Tamalpais manzanita- with sparse Douglas-fir emergent (S) • Native temperate perennial grasslands (F) • Poison oak alliance (F) • Redwood, riparian (F) • Redwood-upland mixed hardwoods (S) • Redwood/tanoak (F) • Rocky serpentine grasses (S) 	<p>Special-Status Plants:</p> <ul style="list-style-type: none"> • <i>Arctostaphylos montana</i> (Mt. Tamalpais manzanita), C • <i>Calochortus umbellatus</i> (Oakland star-tulip), C • <i>Cirsium hydrophilum</i> var. <i>vaseyi</i> (Mt. Tamalpais thistle), C • <i>Hesperolinon congestum</i> (Marin dwarf flax), C • <i>Lessingia micradenia</i> var. <i>micradenia</i> (Mt. Tamalpais lessingia), C • <i>Navarretia rosulata</i> (Marin County navaretia), R • <i>Stebbinsoseris decipiens</i> (Santa Cruz microseris), R • <i>Streptanthus batrachopus</i> (Mt. Tamalpais jewelflower), C • <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> (Mt. Tamalpais jewelflower), C <p>Special-Status Wildlife:</p> <ul style="list-style-type: none"> • <i>Strix occidentalis caurina</i> (northern spotted owl) nesting, C • <i>Oncorhynchus mykiss irideus</i> (central California coast steelhead), C • <i>Oncorhynchus kisutch</i> (coho salmon), C • <i>Accipiter cooperi</i> (Cooper's hawk), C • <i>Accipiter striatus</i> (sharp-shinned hawk), C • <i>Elanus leucurus</i> (white-tailed kite), C • <i>Ammodramus savannarum</i> (grasshopper sparrow), C • <i>Contopus cooperi</i> (olive-sided flycatcher), C • <i>Antrozous pallidus</i> (pallid bat), R 	<p>Dead vegetation from California oak mortality syndrome is very abundant in western portions of the preserve.</p> <p>Important invasive plants include:</p> <ul style="list-style-type: none"> • <i>Genista monspessulana</i> (French broom) • <i>Phalaris aquatica</i> (Harding grass) • <i>Silybum marianum</i> (milk thistle) • <i>Cytisus scoparius</i> (Scotch broom) <p>There is a large network of illegal trails in this preserve that cut through manzanita and other native plant communities.</p>	<p>Parcels purchased from developers in 1991 and 1995.</p> <p>MMWD shares the western boundary of preserve.</p> <p>Cortez Fire Road was converted from narrow trail to fire road in 2007 after pressure from local residents to provide an escape route in case of wildland fire.</p>		

Table 2.1 Summary of Preserve Conditions

Preserve Name, Size, and Perimeter	Sensitive Natural Resources	Known Special-Status and Locally Rare Species	Management Challenges	History and Local Setting	Vegetation Management, Maintenance and Stewardship	Comments
	<ul style="list-style-type: none"> Sargent cypress (F) Sargent cypress alliance (F) Sargent cypress/Mt. Tamalpais manzanita (G1) Serpentine balds (G2) Tanoak alliance (F) Upland deciduous shrubs (F) Upland serpentine grassland (G2) Valley oak riparian mapping unit (F) <p>Wetlands:</p> <ul style="list-style-type: none"> San Geronimo Creek Montezuma Creek Candelero Creek Creamery Creek Deer Camp Creek Bates Canyon Creek Woodacre Creek Pine Mountain Creek Riparian woodlands 	<ul style="list-style-type: none"> <i>Taxidea taxus</i> (American badger), R <i>Syncaris pacifica</i> (California freshwater shrimp)¹ R <p>Locally Rare Species:</p> <ul style="list-style-type: none"> <i>Aquilegia eximia</i> (Van Houtte's columbine), R (only 3 populations in Marin) <i>Arctostaphylos virgata</i> (Marin manzanita), C <i>Arabis blepharophylla</i>, (coast rock cress), C <i>Calamagrostis ophitidis</i> (serpentine reed grass), C <i>Ceanothus velutinus</i> (tobacco brush), R <i>Elymus californicus</i> (California bottle brush grass), C <i>Fremontodendron californicum</i> (California fremontia), C <i>Leptosiphon acicularis</i> (bristly linanthus), C <i>Navarretia heterodox</i> (Calistoga navaretia), R <i>Sidalcea hickmannii</i> ssp. <i>viridis</i> (Marin checkerbloom) may be present, R <i>Toxicoscordion fontanum</i> (marsh zigadenus), C 				
<p>Horse Hill</p> <p>Area = 50.2 acres Perimeter = 1.6 miles</p>	<p>Wetlands:</p> <ul style="list-style-type: none"> Three springs occur on the preserve 	<p>Special-Status Wildlife:</p> <ul style="list-style-type: none"> <i>Accipiter cooperi</i> (Cooper's hawk), C <i>Accipiter striatus</i> (sharp-shinned hawk), C <i>Ammodramus savannarum</i> (grasshopper sparrow), R <i>Antrozous pallidus</i> (pallid bat), R <i>Elanus leucurus</i> (white-tailed kite), C <i>Taxidea taxus</i> (American badger), R 	<p>Horses have created numerous trails.</p> <p>Brooms, <i>Cortaderia</i>, <i>Centaurea calcitrapa</i>, <i>C. solstitialis</i>, identified as priorities for control</p> <p>Important invasive plants include:</p> <ul style="list-style-type: none"> <i>Dipsacus sativus</i> (teasel) <i>Oxalis pes-caprae</i> (Bermuda buttercup) <i>Genista monspessulana</i> (French broom) 	<p>Horses have grazed Horse Hill for over 40 years. At least 3 prehistoric archaeological sites identified. Purchased in 1995.</p> <p>Privately owned horses (max. 14) are grazed over 60 acres, including land belonging to Mill Valley Meadows Homeowners' Association.</p> <p>It is assumed that equine use is the dominant use of Horse Hill and will remain so for the foreseeable future.</p>	<p><i>Dipsacus</i> removal underway.</p> <p>Broom patch near PG&E tower removed.</p>	
<p>Ignacio Valley</p> <p>Area = 900.84 acres Perimeter = 15.1 miles</p>	<p>Sensitive Vegetation Type(s):</p> <ul style="list-style-type: none"> Black oak alliance (F) California bay, buckeye (F) California bay, alder, big leaf maple, willow riparian forest (S) Chamise, eastwood manzanita (G2) Interior live oak- eastwood manzanita (S) Madrone alliance (S) Madrone, California bay, tanoak (S) Mesic trending chaparral (S) Upland deciduous shrubs (F) Valley oak riparian mapping unit (F) Valley oak, coast live oak (S) <p>Wetlands:</p> <ul style="list-style-type: none"> Arroyo de San Jose Creek Two unnamed creeks. Riparian woodlands 	<p>Special-Status Plants:</p> <ul style="list-style-type: none"> <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> (Mt. Tamalpais jewelflower), C <p>Special-Status Wildlife:</p> <ul style="list-style-type: none"> <i>Accipiter cooperi</i> (Cooper's hawk), C <p>Locally Rare Species:</p> <ul style="list-style-type: none"> <i>Datisca glomerata</i> (Durango root)², C <i>Leptosiphon acicularis</i> (bristly linanthus), C <i>Lupinus albifrons</i> (silver lupine)³, host plant for mission blue butterfly, C 	<p>Important invasive plants include:</p> <ul style="list-style-type: none"> <i>Genista monspessulana</i> (French broom) 	<p>Purchased in 1975.</p>		

¹ Unverified but likely in lower Willis Evans Canyon

² Formerly known from a single specimen found at the adjacent Indian Valley Open Space (presumed to have been "imported accidentally". A substantial population of this species was subsequently discovered on this preserve

³ Foodplant of mission blue butterfly, (*Plebejus icarioides missionensis*), C