

**MARIN COUNTY OPEN SPACE DISTRICT'S
ROAD AND TRAIL MANAGEMENT PLAN
TIERED PROGRAM ENVIRONMENTAL IMPACT REPORT
CONSISTENCY ASSESSMENT
BOB MIDDAGH AND GAS LINE TRAILS IMPROVEMENT PROJECT**

Prepared by
Marin County Open Space District
May 11, 2017



**RTMP EIR Consistency Assessment
Bob Middagh and Gas Line Trails Improvement Project**

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**RTMP EIR Consistency Assessment
Bob Middagh and Gas Line Trails Improvement Project**

Project Title

Bob Middagh and Gas Line Trails Improvement Projects

Lead Agency Name and Address

Marin County Open Space District (MCOSD)
3501 Civic Center Drive, Suite 260
San Rafael, California 94903

Contact Person

James Raives
(415) 473-3745 or JRaives@marincounty.org

Project Location

Alto Bowl Open Space Preserve, City of Mill Valley

Project Sponsor's Name and Address

Marin County Open Space District
3501 Civic Center Drive, Suite 260
San Rafael, California 94903

General Plan Designation

Open Space (OS)

Zoning

APNs: 033-102-33 & 47 and 033-200-01
Zoning: Open Area (O-A)

I. DESCRIPTION OF THE RTMP

On December 16, 2014, the Marin County Open Space District (MCOSD) Board of Directors approved the Road and Trail Management Plan (RTMP)¹ and certified its program environmental impact report (EIR) (State Clearinghouse Number 2011012080) (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) reduction of environmental impact from roads and trails on natural resources; and 3) improvements to visitor experience and safety.

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

- Baltimore Canyon Preserve
- King Mountain Preserve
- Blithedale Summit Preserve
- Camino Alto Preserve
- Alto Bowl Preserve
- Horse Hill Preserve

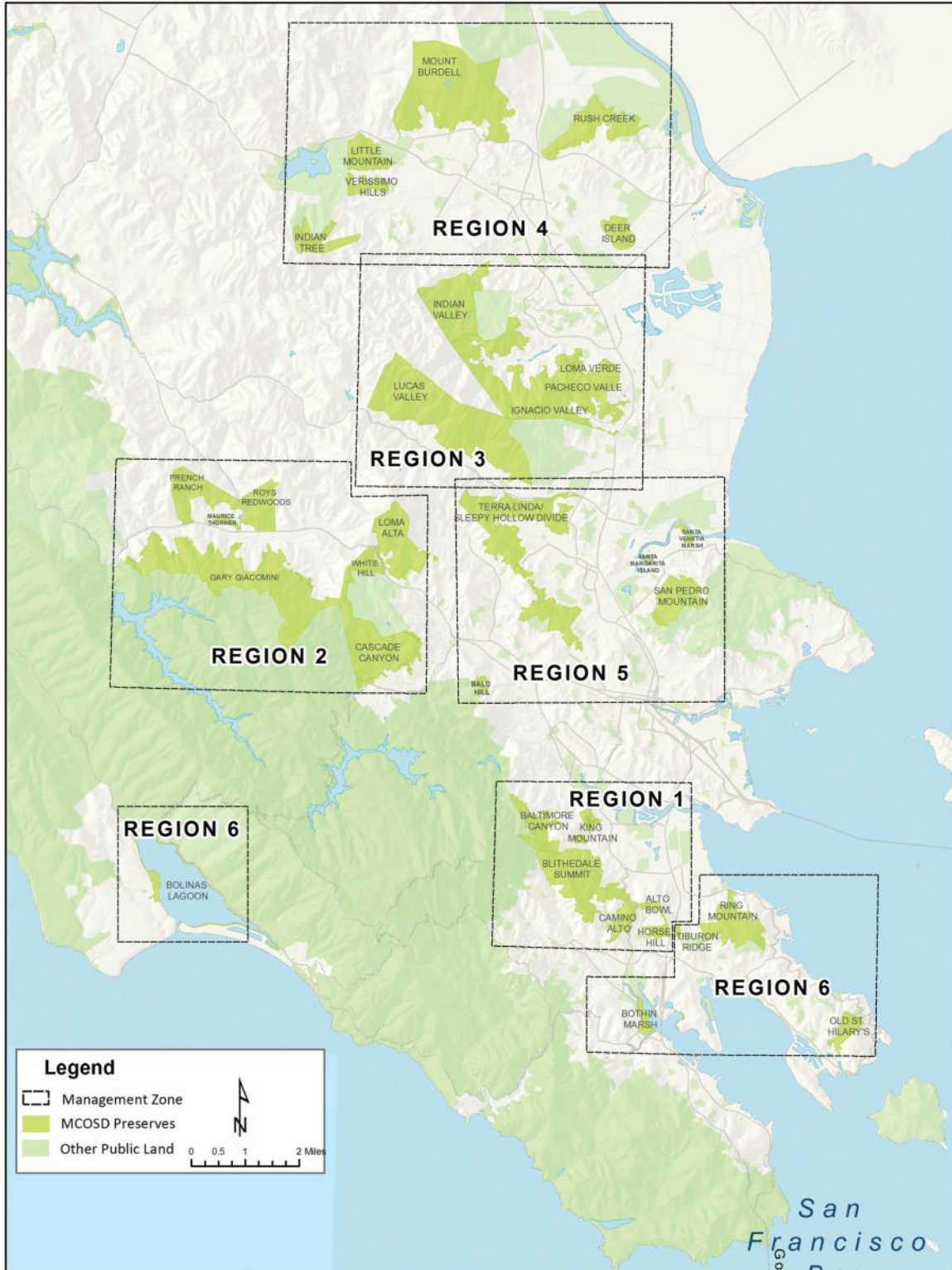
The MCOSD developed the RTMP over the course of four years based on extensive outreach and public input. After adoption of the plan and consistent with the RTMP's *Policy SW.2: System Roads and Trails*, the MCOSD initiated a process to designate a system of roads and trails in all existing open space preserves. The roads and trails eligible for consideration must have existed as of November 2011, which is when the MCOSD completed a report on the condition 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 1 occurred in mid-2015. The map for Region 1 (Figure 2) includes both the Bob Middagh and Gas Line Trails as part of the system.

The RTMP incorporates existing policies from the Countywide Plan and the MCOSD's Policy Review Initiative. Additionally, it identifies 34 new policies that govern the MCOSD's road and trail system. The intent of these policies is to reduce the environmental impacts from the road and trail system and to improve the recreational experience. In addition to these policies, the RTMP included best management practices (BMPs) that will reduce resource effects from any road and trail projects.

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.

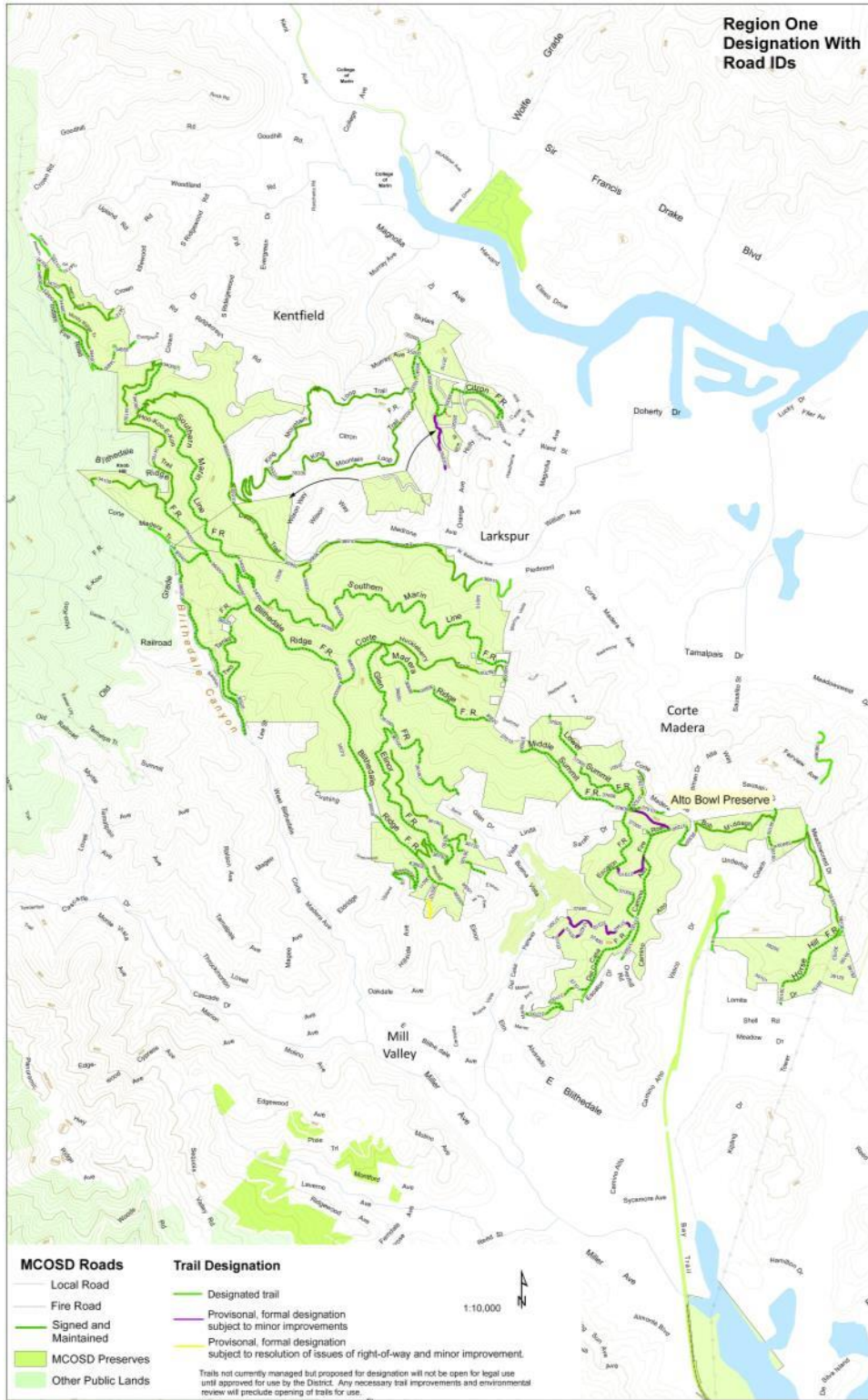
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Figure 1: MCOSD Preserves by Region



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Figure 2: Region 1 Trail Designations



II. CALIFORNIA ENVIRONMENTAL QUALITY ACT PROCESS

The California Environmental Quality Act (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. CEQA allows a lead agency (MCOSD) to examine subsequent activities in light of the program EIR to determine if the agency must prepare additional environmental review. If the agency determines that the later activity would have effects that the program EIR did not examine, the lead agency must prepare a new negative declaration or EIR. If the agency finds that the subsequent project does not have new effects or does not require new mitigation measures, it can approve the activity as being within the scope of the project covered by the program EIR, and does not require a new environmental document. CEQA Guidelines Section 15162, Subsequent EIRs and Negative Declarations, governs when subsequent environmental review is required following certification of a program EIR. Section 15162 does not require a subsequent EIR or negative declaration unless one of the following is true:

- A. The lead agency proposes substantial changes in the project that would require major revisions of the previous EIR or negative declaration because of new significant environmental effects or a substantial increase in the severity of previously identified effects;
- B. Substantial changes occur to the circumstances under which the project is undertaken that would require major revisions of the previous EIR or Negative Declaration because of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- C. New information of substantial importance, which was not known and could not have been known at the time the lead agency certified the previous EIR or adopted the negative declaration, shows any of the following:
 1. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 2. Significant effects previously examined would be substantially more severe than shown in the previous EIR;
 3. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 4. Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

III. PROJECT DESCRIPTION

A. BOB MIDDAGH TRAIL

The Bob Middagh Trail is located within the Alto Bowl Open Space Preserve (Alto Bowl Preserve or Preserve) (Figure 3 and Figure 4). The Marin Municipal Water District built the Bob Middagh Trail to be a 16- to 20-foot wide access road for installation of a water line. The MCOSD manages this “road” as a five-foot wide hiker and equestrian trail. Through the RTMP trail designation process for Region 1, the MCOSD incorporated the Bob Middagh Trail into its road and trail system, as shown in Figure 2. MCOSD proposes upgrades and re-alignments to improve drainage and replace two failing culverts.

The project would reduce sedimentation into the watershed by incorporating RTMP design and BMP requirements to minimize trail erosion and improve drainage (see Appendix A for all applicable BMPs). The improvements would make the route safer and more accessible for all users by reducing the trail grade and improving sight lines. The project would also change the designation of the trail to allow mountain bike access. The primary purpose of this change in use is to provide cyclists with a route across the preserve to other natural areas west of Alto Bowl, without riding on busy unsafe roads, such as Camino Alto Road. This connection would facilitate regional non-paved bike connections from the San Francisco Bay Trail to the greater Mt. Tamalpais area.

To incorporate bicycles safely onto the trail with other user groups, the MCOSD is proposing several reroutes to reduce linear grades and provide increased trail sinuosity to decrease bicycle speeds. Three of the existing Bob Middagh trail segments exceed ten percent grade, which is undesirable for a number of reasons, including speed, accessibility, erosion, and safety. In addition, the project includes rolling grade dips and armored drainages to improve trail drainage and protect waterways by reducing erosion.

The project includes replacement of two damaged and undersized culverts with new ones that are sized appropriate to the watershed. To replace the culverts, the MCOSD would excavate a small area, including portions of the existing trail, around the existing culvert, remove the existing culvert, and replace the culvert and excavated material. After replacing the existing culverts, the MCOSD would rebuild the trail more or less in the same location. No other work would occur in the riparian or stream habitat.

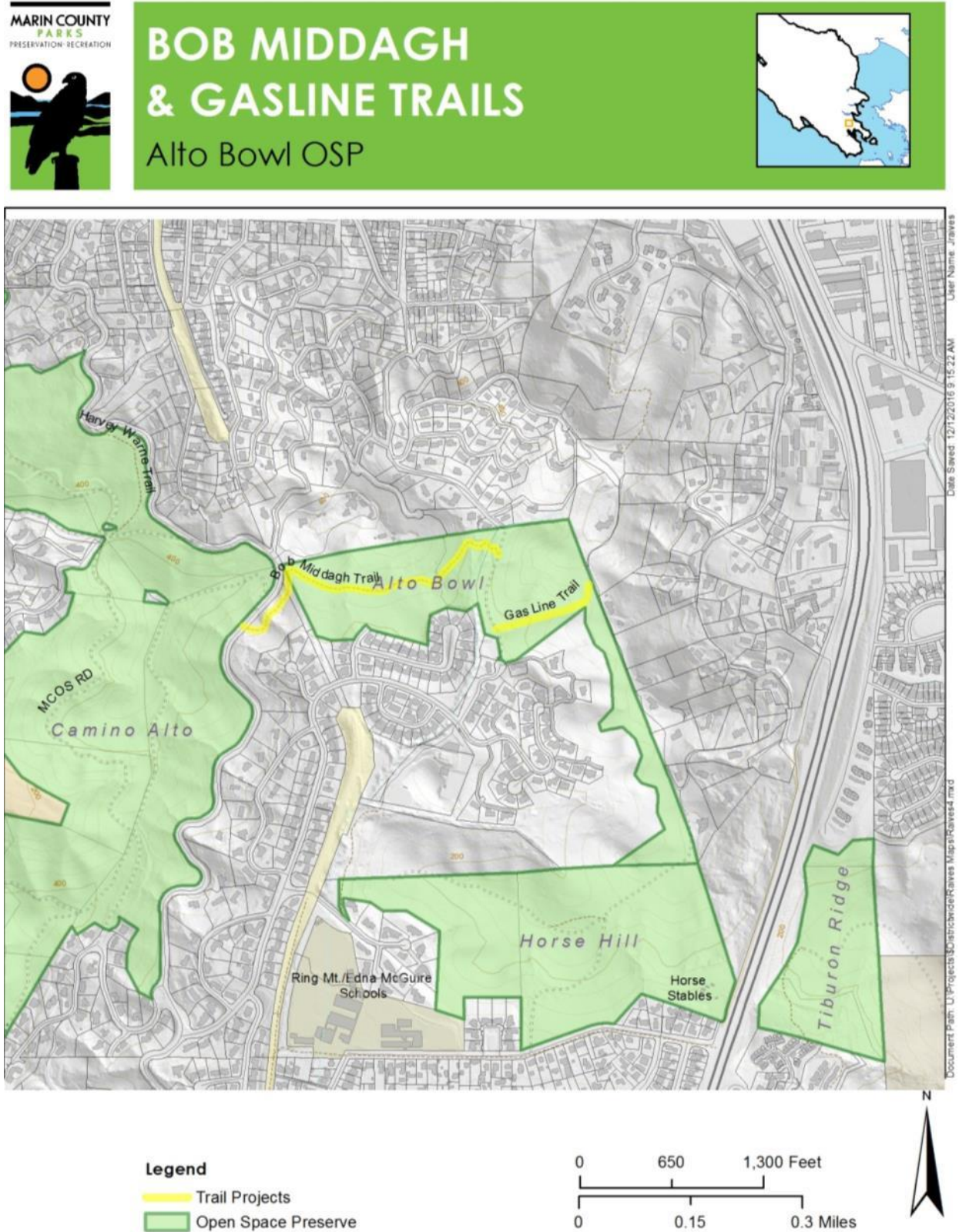
The proposed realignments, drain dips, new culverts, and other actions to protect the environment and improve the user experience would increase the sustainability of the trail consistent with the RTMP policies, BMPs, and trail design standards. These measures would substantially reduce impacts from erosion and runoff into nearby drainages, thereby reducing sedimentation into the Richardson Bay watershed. The project also includes decommissioning trail segments rerouted by the project in order to minimize habitat fragmentation. These improvements would reduce the trail’s physical impacts to the preserve and watershed.

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Figure 3: Regional Map



Figure 4: Location Map



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Table 1: Summary of Reroutes

Site	Point ID	Increase in Linear Feet	Description
Reroute 1	1 to 3	81	Reroute 1 begins at Point ID 1 and adds 295 feet of new trail, ending at Point ID 3. The existing alignment exceeded an 11 percent grade on a sweeping corner. The project includes decommissioning the existing trail segment (216 feet), which would result in a net increase of 81 feet of trail.
Reroute 2	4 to 6	128	Reroute 2 begins at Point ID 4 and adds 364 feet of new trail, ending at Point ID 6. The existing 236-foot alignment has an average of 10% grade and exceeding 19% for short sections, into an armored swale at its mid-point. The project includes decommissioning the existing trail segment, but leaving the existing armored swale. The MCOSD would install a new armored swale on the new alignment at Point ID 5. The new trail alignment would result in a net increase of 128 feet of trail.
Reroute 3	7 to 15	807	Reroute 3 begins at Point ID 7 and adds 1,293 feet of new trail, ending at Point ID 15. The existing trail has an average grade of 14.55%. The project includes the use of 64 feet of the existing trail with the remaining 486 feet to be decommissioned, resulting in net increase of 807 feet of new trail. The new alignment would have four in-sloped climbing turns and two rock retention walls where the new trail crosses the existing trail to discourage shortcutting.

(Parks, 2016a)

In summary, the proposed project would have the following features (Parks 2016a):

- Realignment of 1,952 feet of new trail;
- Decommissioning of 938 feet of existing trail;
- Installation of four sloped climbing turns;
- Installation of three rock retention walls;
- Removal of one eight to ten inch diameter at breast height (DBH) arroyo willow tree;
- Construction of one rock armor swale 20 feet wide by ten feet long; and
- Replacement of two failing culverts.

After completion of the project, the Bob Middagh Trail would be 3,461 feet long and approximately five feet wide. This would result in a net increase of 1,016 feet of trail. The trail would include reverse grade dips approximately every 80 feet with 5 to 10 percent grade and 2 percent outslope. The trail would be open to hikers, bikers, and equestrians.

The project includes the removal of two non-native pine trees that are 14-inch diameter at breast height (DBH) and nine-inch DBH, respectively. In addition, the MCOSD would remove two non-native eucalyptus trees (15-inch DBH and 11-inch DBH). The project also includes the removal of one coast live oak limb, which accounts for less than 15 percent of entire tree, while keeping the remainder of the tree.

Figure 5: Bob Middagh Trail Project Features



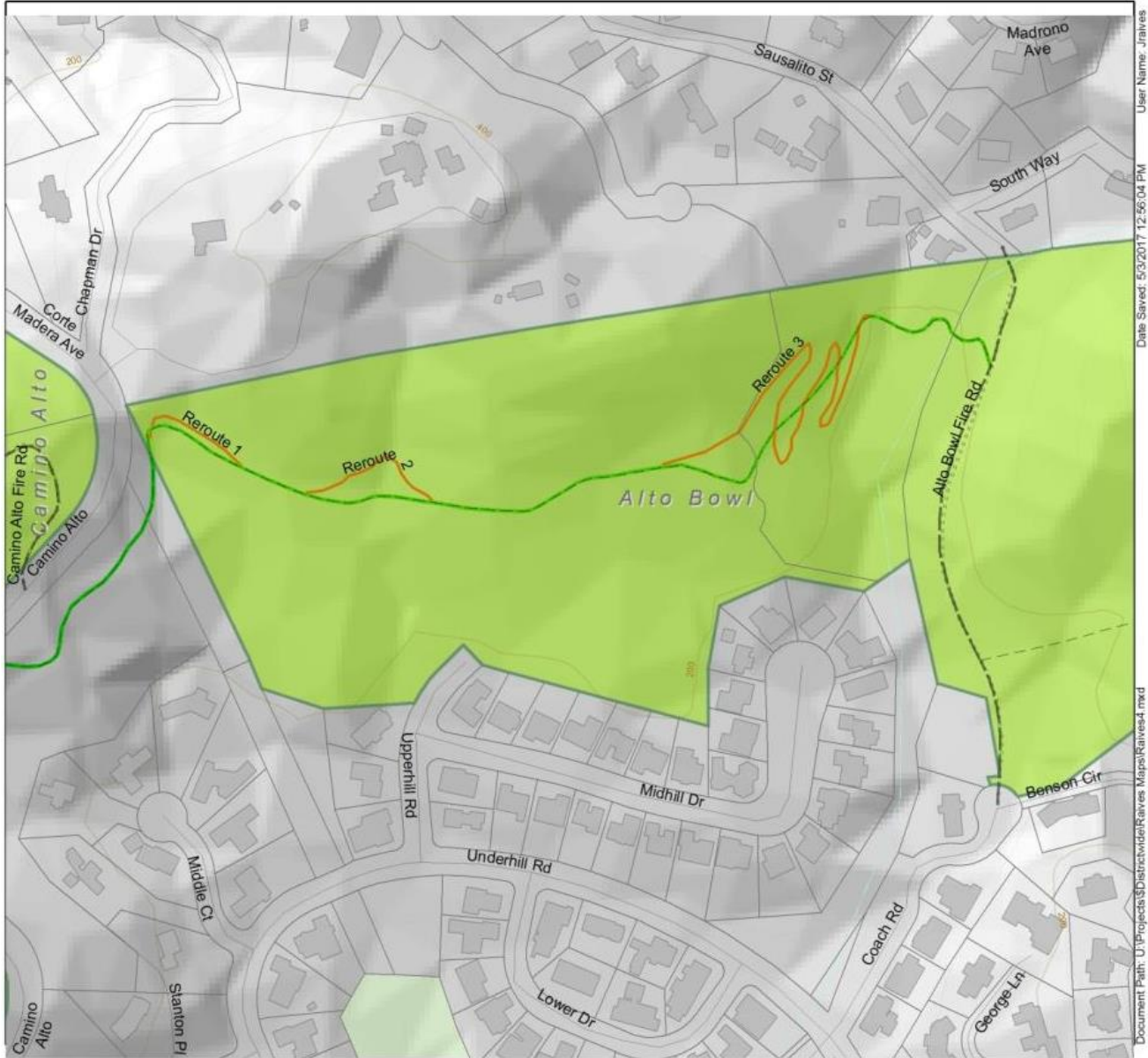
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ALTO BOWL PRESERVE

Bob Middagh Trail Reroutes





Property Boundaries are general depictions and are not survey accurate

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Table 2: Bob Middagh Trail Improvements (see Figure 6)

Point ID	Begin Feet	End Feet	Action	Feature	Length	Width	Height	Treatment Description
1	0		Begin	Reroute 1				Reroute trail to 5% grade adding sinuosity and reverse grade dips
2	10	40	Install	Rock Retention Wall	30 feet		30 inches	18 inches minus riprap with 2:1 slope
3		218	End	Reroute 1				Reconnect to existing trail - end of reroute 1
4	354		Begin	Reroute 2				Reroute trail to a contoured grade adding sinuosity and reverse grade dips and rock armored swale
5	495	515	Install	Rock Armored Swale	10 feet	20 feet	0.5 to 1 foot	5.5 cu yds of rock
6		632	End	Reroute 2				Reconnect to existing trail - end of reroute 2
7	1,057		Begin	Reroute 3				Reroute trail to 7-10% grade adding sinuosity and reverse grade dips
8	1,400		Construct	Climbing turn				In-sloped climbing turn with grade reversal dips before and after, includes 15-20 long rock retention wall on outside of the downhill trail tread
9	1,551	1,566	Install	Rock Retention Wall	15 feet		2.5 feet	18 inches without riprap
10	1,620		Construct	Climbing in-sloped turn				In-sloped Climbing turn with grade reversal dips before and after, includes 15 to 20-long rock retention wall on outside of the downhill trail tread
11	1,742	1,806	Intersect					Use 64 feet of existing trail
12	1,853		Construct	Climbing in-sloped turn				In-sloped climbing turn with grade reversal dips before and after, includes 15-20-foot long rock retention wall on outside of the downhill trail tread
13	1,905	1,920	Install	Rock Retention Wall	15'		2.5'	18 feet without riprap
14	2,023		Construct	Climbing in-sloped turn				In-sloped climbing turn with grade reversal dips before and after, includes 15-20-foot long rock retention wall on outside of the downhill trail tread
15		2,253	End	Reroute 3				
16	2,280		Replace	Culvert				Replace existing culvert as directed by Stetson Engineering
17	2,280	2,445	Armor tread					Armor tread as needed
18	2,430		Replace	Culvert				Replace existing culvert as directed by Stetson Engineering
19		2,445	Intersect	Alto Bowl FR				

Figure 6: Bob Middagh Project Features



B. GAS LINE TRAIL

The Gas Line Trail is a steep fall line trail that follows a PG&E transmission and gas line alignment, between Alto Bowl Fire Road, near its junction with Coach Road, and the Horse Hill Trail (Figure 3 and Figure 4). It is an unsustainable trail with an average grade of 26 percent and maximum grade of 30 percent. It first appeared as a social trail following the alignment of the PG&E easement. Due to the substandard design and alignment, the trail is unable to be de-watered, and continues to erode and discharge sediment to creeks and storm drains within the watershed. The MCOSD has investigated several trail improvement options including, but not limited to; reconstructing the trail within its existing alignment with built steps and/or switchback, or construction of a new alignment under seven percent grade.

The MCOSD designated this trail for equestrian and pedestrian uses and does not propose to change this designation. The project includes constructing 1,610 feet of new contoured trail at a seven percent grade, installing appropriate dewatering measures for a more sustainable design and reduce potential sediment loading to streams, realigning 480 feet of the existing Horse Hill Trail, decommissioning 1,554.2 feet of existing social trails, and incorporating other actions to protect the environment and improve the user experience (Parks, 2016a and Raives, 2017). MCOSD would build the new trail using the RTMP’s policies, design standards, and BMPs. As such, it would substantially reduce impacts from erosion and runoff into nearby drainages, thereby, reducing the amount of sedimentation into the Richardson Bay watershed. The project also includes the following trail decommissioning projects: (1) the existing Gas Line Trail alignment; (2) a social trail that connects Meadowcrest Drive to the Horse Hill Trail; and (3) a portion of the Horse Hill Trail, moving it farther away from private property.

The project would include the following features (Parks, 2016b; Raives, 2017):

- Construction of 2,090 feet of new tread with a five-foot width, which includes 1,610 feet of the Gas Line Trail re-route and 480 feet of the realigned Horse Hill Trail;
- Decommissioning of 1,554.2 feet of existing trail, including 788.2 feet of the old Gas Line trail, 256.0 feet of social trails on ridge top, and 510.0 feet of the existing Horse Hill Trail;
- Installation of two switchback turns;
- Placement of one 36-inch by 20-foot long HDPE culvert across a broad swale;
- Construction of one ramp at a 110 feet long; and
- Removal of one 8 inch DBH coast live oak.

Table 3: Gas Line Trail Improvements

Point ID	Begin Feet	End Feet	Action	Feature	Length (feet)	Width (feet)	Height (feet)	Treatment Description	Rock Needed
1	0		Begin / Construct	Ramp off of Fire Road	110	5	10	Begin with 9% ramp off Alto Bowl FR. for 110 feet with a rise of 10 feet. 18-inch riprap at 2:1 slope for outer wall of ramp. This ramp crosses the bottom of an inactive slump. In addition to rock, the segment may include geo-web.	86 cu yds fill + 26 tons 18-inch to 12-inch mix riprap
2	60	80	Install	36-inch Culvert	20	3	3	Install 36 inch diameter culvert to span drainage relief swale of old slump	
3	630		Construct	Switchback				Switchback with grade reversal dips before and after, may include 15-20-	

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Point ID	Begin Feet	End Feet	Action	Feature	Length (feet)	Width (feet)	Height (feet)	Treatment Description	Rock Needed
								inch long rock retention wall on outside of the downhill trail tread	
4	985		Construct	Switchback				Switchback with grade reversal dips before and after, may include 15-20-inch long rock retention wall on outside of the downhill trail tread	
5	1085		Install	Rock Armored Swale	10	5	1	No established bed and bank, however based on soils and the crossing of a swale, recommendation is to armor tread 10 inch in each direction, and install rock swale	2 cu yds of 12 inches-6-inch minus mix 1.5 cu yds 1.5-inch base rock
6	1290		Install	Rock Armored Swale	10	5	1	No established bed and bank, however based on soils and the crossing of a swale, recommendation is to armor tread 10' in each direction, and install rock swale	2 cu yds of 12"-6"minus mix 1.5 cu yds 1.5-inch Base rock
8		1708	End					End Gas Line Tr. reroute, with intersection of Horse Hill Tr. @ existing property boundary marker	
9 to 10	0	225	Decom					Pull outer fill prism and re-contour	
10 to 11	225	775	Decom					Rip tread to 6-inch depth / Install reverse grade dewatering berms / Implement appropriate erosion control measures	
11 to 12	775	1,086	Decom					Rip tread to 6" depth. Implement appropriate erosion control measures	
8 to 11	0	480	Construct	Reroute	480	5		Construct a reroute of a portion of the Horse Hill Trail to move it farther from adjacent residences	

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Figure 7: Gas Line Trail Project Features

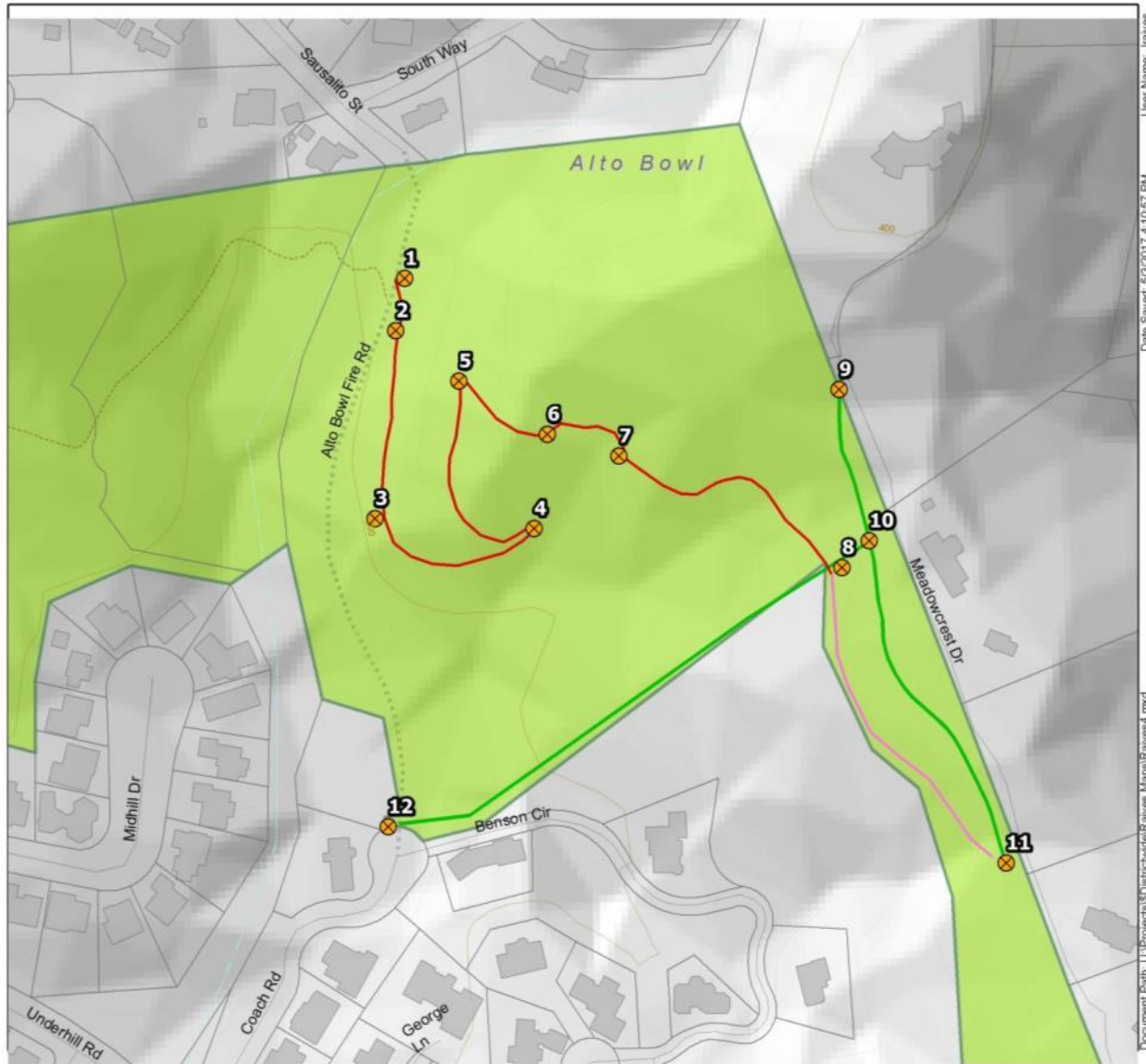


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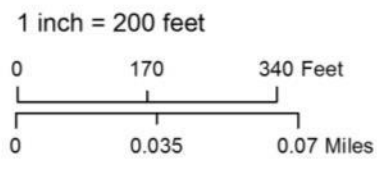
ALTO BOWL PRESERVE

Gas Line Trail Reroutes





- Horse Hill Trail Reroute 1 Project Features
- Gas Line Trail Reroute Open Space Preserve
- Trail Decommissions



Property Boundaries are general depictions and are not survey accurate

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C. CONSTRUCTION

Construction of the projects would occur from May 15, 2017 to August 2017 (approximately 8 weeks total). Work on the culverts would not commence until the ephemeral creeks on site have dried up. A maximum of four MCOSD employees would be required to perform the work daily. Work would take place at least four days a week from 8 am to 6 pm. Construction equipment would include an excavator, dozer, two power carriers, chainsaws, hedge trimmers, and a dump truck. Staging areas would be established along the Coach Fire Road corridor, over 100 feet away from the creeks.

D. OPERATION

After construction of the project, the trails would reopen to the public and use of the area would continue, similar to existing conditions. As a result of the new designation, bike use would be allowed on the Bob Middagh Trail. Rangers would patrol the decommissioned Gas Line Trail to ensure revegetation of the alignment and to ensure the designations are followed by trail users. Regular maintenance would be similar to existing conditions and would include brushing, vegetation clearing, and monitoring of the trail condition. As the new alignments would be more sustainable, annual maintenance is likely to be minor and trail improvements would be on an as needed basis.

E. PROJECT DESIGN FEATURES

The project would be designed and constructed in compliance with the RTMP. See Appendix A for a list of all applicable BMPS that are incorporated into the project. The figures below show typical drawings for some of the proposed project features.

Figure 8: Rock Armored Swale

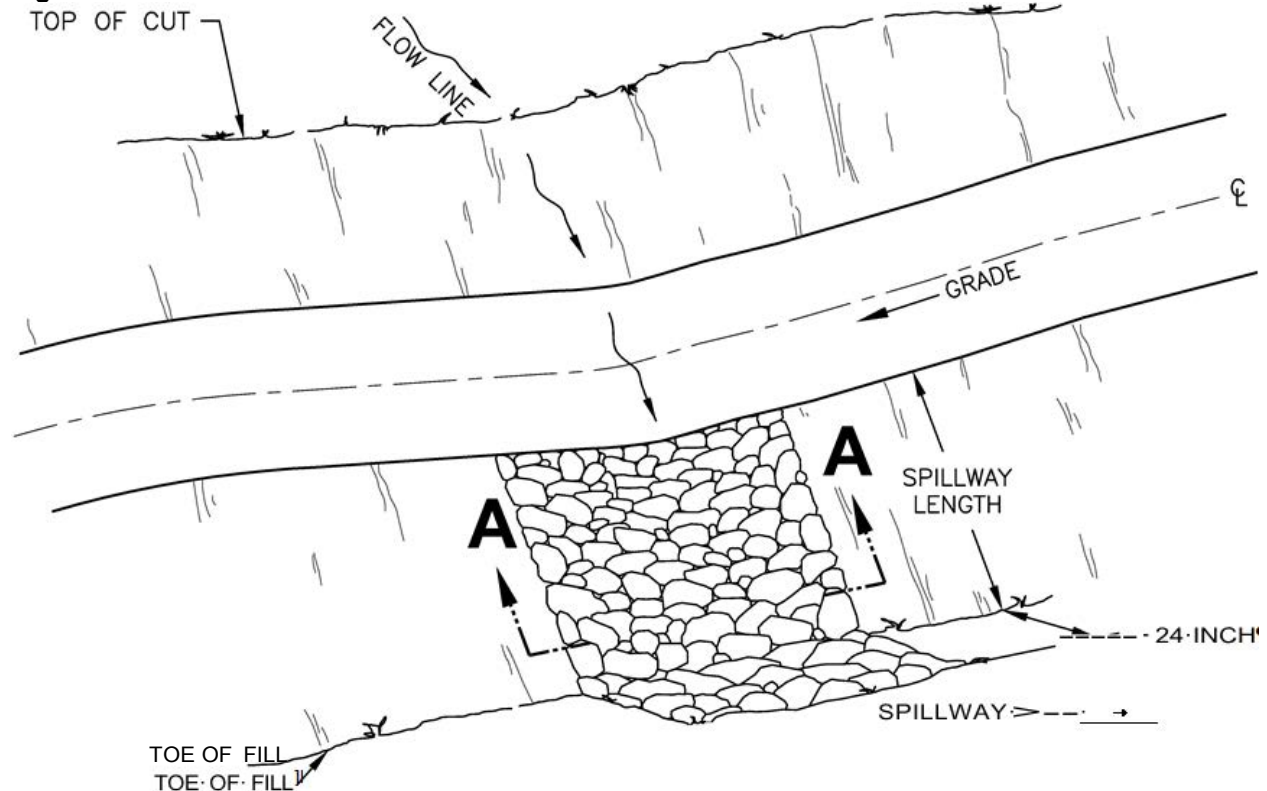


Figure 9: Rock Spillway for Drainage Dip or Cross Drain

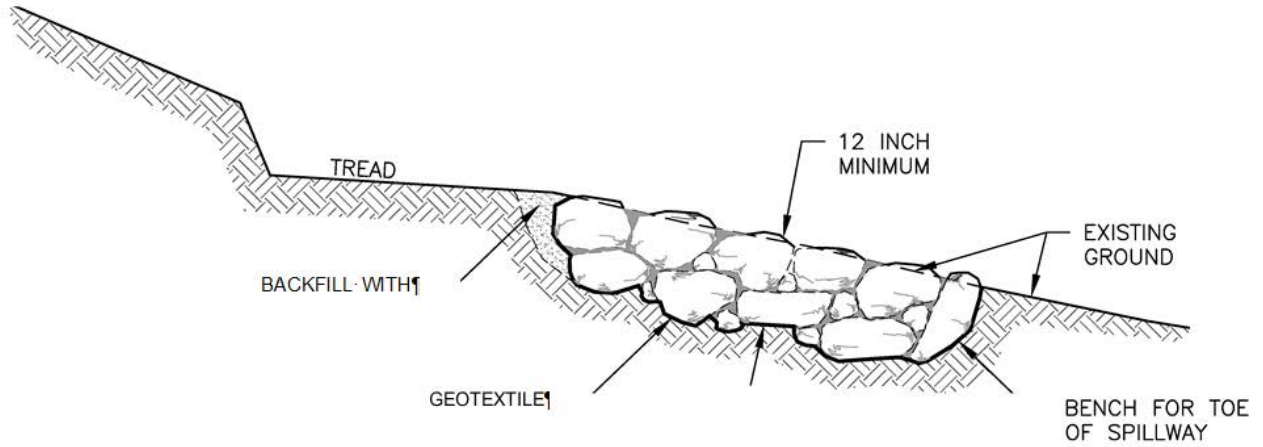


Figure 10: Rock Spillway for Culvert Outlet

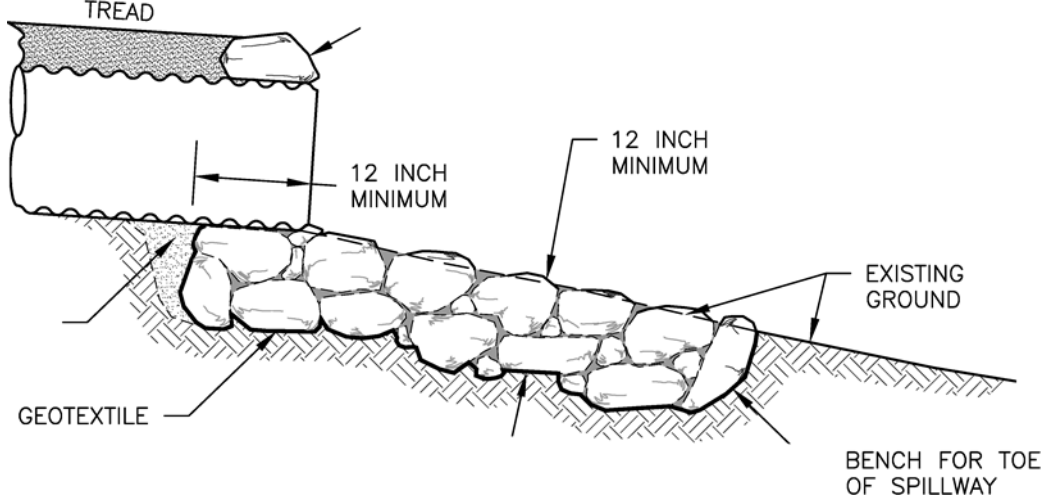


Figure 11: Rock Retention Wall

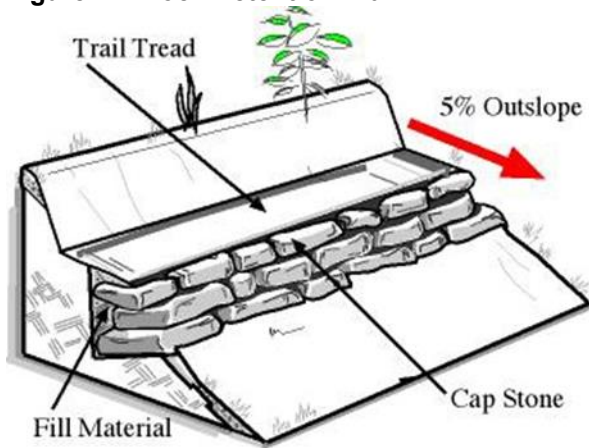
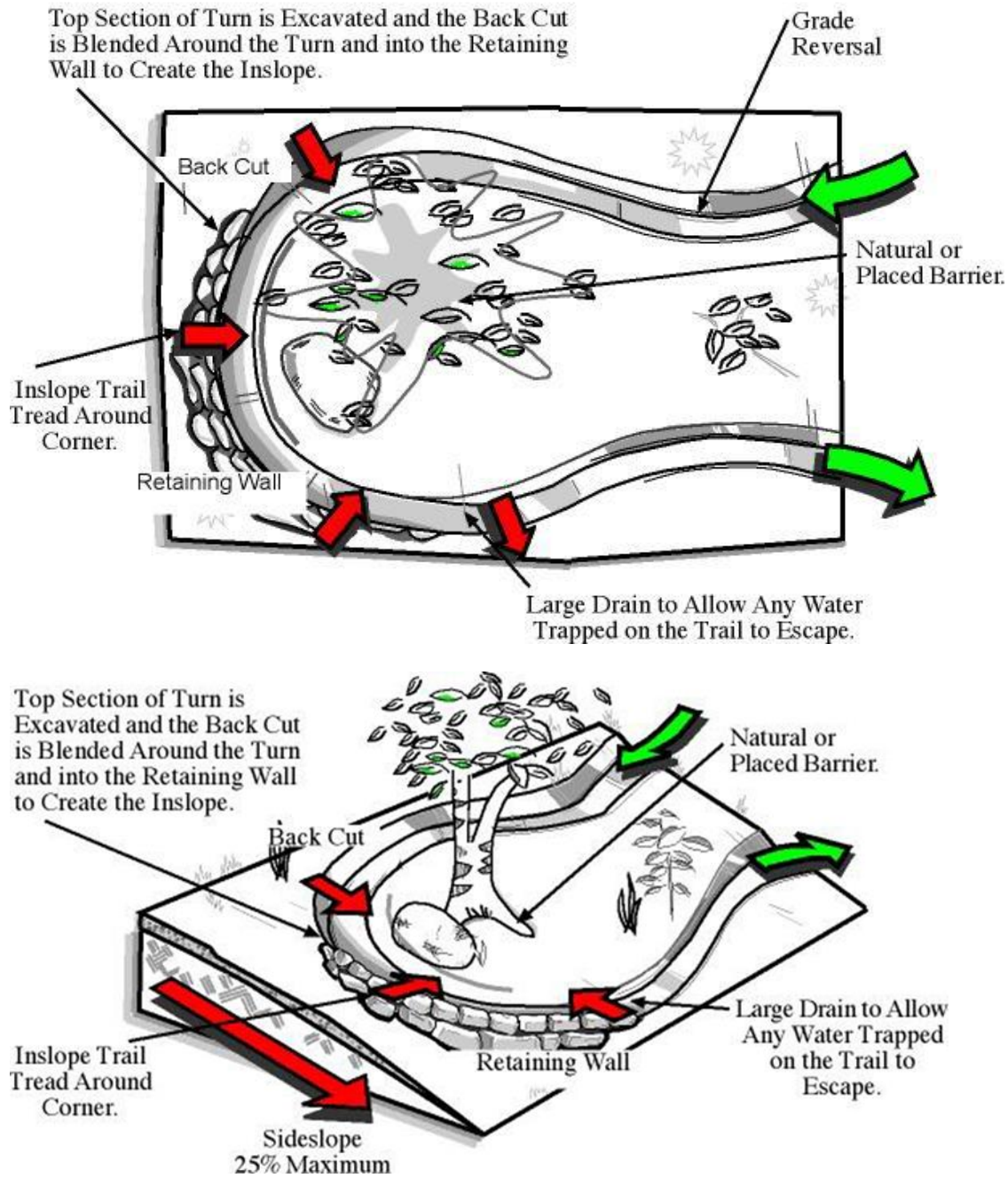


Figure 12a and 12b: Insloped Turn

Insloped Turn



F. REQUIRED APPROVALS

The City of Mill Valley does not require a conditional use permit because hiking areas are a permitted use in the OA zoning district. The replacement of the failing culverts would require permits from the U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, and the California Department of Fish and Wildlife. However, the projects are not within the coastal zone and do not require permits from the California Coastal Commission or the San Francisco Bay Conservation and Development Commission.

IV. CONSISTENCY EVALUATION

A. BACKGROUND

This evaluation compares environmental impacts associated with the proposed project to those identified in the 2014 RTMP EIR in order to determine if there is new information, changed circumstances, or new environmental effects requiring revisions to the mitigation measures, as described in CEQA Guidelines Section 15162. Below is a description on how to use and understand the checklist and associated analysis. The environmental checklist is organized by the resource areas required by CEQA and as analyzed by the RTMP EIR (e.g., aesthetics, agriculture and forestry resources, air quality, etc.). Each resource section includes the 2017 CEQA Appendix G Criteria in the first column of the checklist. The subsequent columns are titled “EIR Section and Page”, “Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?”, “Do Any New Circumstances Involve New or Substantially More Severe Impacts?”, “Any New Information of Substantial Importance Requiring New Analysis or Verification?”, and finally “Do Existing FEIR Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?”. The purpose of each column is described below, as specified in CEQA Guidelines Section 15162.

EIR Section and Page

The RTMP FEIR consists of the following documents:

- Draft Environmental Impact Report;
- Public Comments on the Draft EIR;
- Response to Comments; and
- Changes to the Draft EIR based on comments and responses.

The second column in the checklist, “EIR Section and Page,” provides a cross-reference to where in the RTMP FEIR the reader can find information and analysis that pertains to the environmental issue.

Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?

This checklist column indicates whether there are proposed changes in the current project would result in new significant impacts that have not already been considered in the FEIR or a substantial increase in the severity of a previously identified significant impact that would require major changes to the RTMP EIR.

Do Any New Circumstances Involve New or Substantially More Severe Impacts?

This column indicates whether there are new circumstances with respect to the project (e.g., changes to the project site or the vicinity) that have occurred subsequent to certification of the FEIR

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that would result in the proposed project having new significant impacts or substantially increase the severity of an impact identified in the RTMP EIR.

Any New Information of Substantial Importance Requiring New Analysis or Verification?

This column indicates whether new information of substantial importance that was not known and could not have been known at the time that the RTMP FEIR was certified. Subsequent environmental review would be required if the new information shows any of the following:

- (A) The project would have one or more significant effects not discussed in the prior environmental documents;
- (B) Significant effects previously examined would be substantially more severe than shown in the prior environmental documents;
- (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project;
- (D) Mitigation measures or alternatives that are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment.

However, if the additional analysis completed as part of this environmental review finds that the conclusions of the prior environmental documents remain the same, the answer to this question is “no” and CEQA does not require the agency to prepare additional environmental documentation. The MCOSD will make available any new studies completed as part of this environmental review.

Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?

This column indicates whether the RTMP or its FEIR identified feasible policies or BMPs to avoid or reduce impacts to a less than significant level. A “yes” response indicates that the previously adopted measures would effectively reduce impacts associated with the proposed project to a less than significant level. A “no” response would indicate that previously adopted measures are insufficient to reduce new or more severe impacts and the project requires new mitigation measures. A “NA” response indicates that this supplemental environmental review concludes that the impact does not occur with this project and, therefore, does not require mitigation.

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B. AESTHETICS

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Have a substantial adverse effect on a scenic vista?	Section 14.2.2 Page 14-5	No	No	No	NA
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Section 14.2.2 Page 14-6	No	No	No	NA
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	Section 14.2.2 Page 14-5	No	No	No	NA
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Section 14.2.2 Page 14-6	No	No	No	NA

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

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

Background

This analysis is based on site visits by MCOSD staff, information contained in the RTMP and its associated EIR, the Marin CWP, and City of Mill Valley General Plan. Under CEQA, a scenic vista is an area that is designated, signed, and accessible to the public for the purposes of viewing and sightseeing.

Existing Resources

The project site is located within the Alto Bowl Open Space Preserve, in the City of Mill Valley. The project site totals 37 acres and includes two unnamed ephemeral creeks that flow from a residential area located between the Mill Valley and Corte Madera (located at the end [south] of Sausalito Street), south through the project site. Habitat on site includes open grasslands, mixed oak woodlands, and some riparian vegetation (including willows) near the creeks. Elevations at the preserve range from 150 feet to 400 feet above mean sea level. The project site is used for public recreation and is surrounded by residential development in the Town of Corte Madera to the north and east, residential development in the City of Mill Valley and the Horse Hill Open Space Preserve to the south and the Camino Alto Road and the Camino Alto Open Space Preserve to the west. The Bob Middagh Trail crosses two branches of Stafford Manor Creek over two failing culverts. The visual setting of the project site is of open rolling hills, creeks, and patches of trees and vegetation, crossed by existing trails and the Alto Bowl Fire Road.

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Figure 13: Alto Fire Road



Figure 14: Bob Middagh Trail



Figure 15: Bob Middagh Trail Creek Crossing



Figure 16: Coach Road Trailhead



Figure 17: Gas Line Trail



Figure 18: Sutton Manor Creek Upstream



Project Impacts

Neither the City of Mill Valley General Plan nor the Marin Countywide Plan contains designated scenic vistas in the project area and therefore the project would have no impact to scenic vistas (City of Mill Valley, 2013 and County of Marin, 2007).

Implementation of the project would result in temporary, small-scale visual impacts in an area affected by existing designated and social trails, fire roads, paved roads, and suburban development. Construction of the proposed project includes small modifications to the visual environment from the constructing trail improvements and re-routes, and decommissioning of trail segments. Changes to the visual environment during construction would include construction equipment staged at the site, disturbed land, and temporary stormwater protection measures such as waddling and straw. Materials such as the culverts, gravel, and rocks would be temporarily stored on site prior to being used by the project and equipment such as the excavator, dump truck, and dozer would be stored on site for the 8-week construction period. This equipment would be stored in a designated staging area when not used away from the creek. Given the short duration of the changes in the visual setting and the limited scale compared to the entire preserve, this impact would be less than significant.

The project site is vegetated with many trees and also includes a rock outcropping along the Bob Middagh Trail. The project does include the removal of two non-native pine trees that are 14-inch DBH and nine-inch DBH, and two non-native eucalyptus trees (15-inch DBH and 11-inch DBH). The project also includes the removal of one coast live oak limb, which accounts for less than 15 percent of entire tree, while keeping the remainder of the tree. The trees that will be completely removed are not native and therefore are not protected by the Marin County Native Tree Preservation and Protection Ordinance. This tree removal would be minor compared to the dense stands of trees at the project site and the visual change would not be detectable from offsite locations and this impact would be less than significant.

After construction, the trails and decommissioned areas would be visible, but as new vegetation grows, it would soften the visibility of these changes. Operation of the project would involve use of the trails for recreation, similar to existing conditions and trail maintenance as needed. As disturbed vegetation matures and grows, the visual impacts associated with the realignments would be reduced. Overall, impacts to the visual character of the site would be less than significant as the project would be replacing existing trail alignments with new trail alignments of the same width and approximate length. Designating the Bob Middagh Trail for bicycle use would have no impact on the visual environment.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the RTMP would have a less than significant impact on a scenic vista and less than significant impact on the existing visual character of the site 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, p. 14-5).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

As described above, with the proposed project would have minor short term visual impacts consistent with those anticipated under the RTMP EIR (less than significant) and therefore the proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. Further, the projects are consistent with the circumstances described in the RTMP EIR as there are no new designated scenic vistas and the visual environment of the Alto Bowl Preserve has not changed substantially since adoption of the RTMP EIR. The proposed trail improvements are consistent with the visual modifications anticipated by the RTMP EIR and therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts.

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

Background

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to protect state highways located in areas of outstanding natural beauty. California's Scenic Highway Program was created by the Legislature in 1963 and is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment.

Existing Resources

There are no designated scenic highways in Marin County and the project contains no structures (historic or otherwise) (Caltrans, 2017).

Project Impacts

As there are no designated scenic highways in Marin County, the project would have no impact on scenic resources within a state scenic highway.

Relationship to the RTMP

The RTMP EIR stated that there are no designated scenic highways in Marin County and as a result, implementation of the RTMP would be not impact scenic resources within a designated scenic highway or road (MCOSD, 2014a).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not substantially damage scenic resources and this impact would be less than significant impact. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those

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evaluated in the RTMP EIR. Similarly, there are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new information on the visual resources within scenic highways within Marin County that is of substantial importance requiring new analysis or verification.

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

Background

Light pollution is an unwanted consequence of outdoor lighting and includes such effects as sky glow, light trespass, and glare. Light trespass is light being cast where it is not wanted or needed, such as light from a streetlight or a floodlight that illuminates a neighbor's bedroom at night making it difficult to sleep. Glare can be thought of as objectionable brightness.

Existing Resources

The Alto Bowl Preserve does not contain any sources of light or glare, consistent with MCOSD policy. However, local area roads adjacent to the preserve have lighting and minor amounts of offsite lighting from neighboring residences is cast onto MCOSD land at night.

Project Impacts

The proposed project does not include any new sources of light or glare and therefore the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Relationship to the RTMP

The RTMP EIR concludes that implementation of 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 concludes 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, p. 14-6).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project does not include any new sources of light or glare and therefore, it would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh

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and Gas Line trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances or new information resulting in new significant or substantially more severe impacts.

C. AGRICULTURAL AND FORESTRY RESOURCES

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Section 14.3.2 p. 14-8	No	No	No	NA
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Section 14.3.2 p. 14-8	No	No	No	NA
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	Section 14.3.2 p. 14-8	No	No	No	NA

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

Background

The California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP) provides a classification system based on technical soil ratings and current land use. The FMMP is an informational service only and does not have regulatory jurisdiction over local land use decisions. The minimum land use mapping unit is 10 acres unless specified; the map incorporates smaller units of land into the surrounding map classifications. Pursuant to CEQA Guidelines Appendix G, the term “Farmland” refers to FMMP map categories Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (hereafter collectively referred to as “Farmland”). Generally, any conversion of land from one of these categories to a lesser quality category or a non-agricultural use would be considered to be an adverse impact. These map categories are defined as follows:

Prime Farmland: Land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to

produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

Unique Farmland: Land of lesser quality soils used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. It is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops include oranges, olives, avocados, rice, grapes, and cut flowers.

Farmland of Statewide Importance: Land that is similar to *Prime Farmland* but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.

Existing Resources

The Alto Bowl Open Space Preserve does not have any existing agricultural uses and does not contain any prime, unique, or important farmland. The California Department of Conservation maps this area as a combination of “Urban and Built-Up Land” and “Rural Residential Land” (California Department of Conservation, 2017). Additionally, the zoning for the property is “Open Area (OA),” which is not an agricultural zone (City of Mill Valley, 2009).

Project Impacts

As the project site does not contain agricultural use and the use of the site would remain the same (open space/recreation), the project would not convert any farmland or conflict with existing zoning for agricultural use, or a Williamson Act contract.

Relationship to the RTMP

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

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 (MCOSD, 2014a, p. 14-8).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not affect important farmlands, Williamson Act contract, lands zoned for agricultural uses, or otherwise affect farmland. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. There are no new circumstances compared to those described in the RTMP EIR and the proposed trail improvements are consistent with the EIR’s assessment of farmland impacts and there are no changed circumstances or new information resulting in new significant or substantially more severe impacts.

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))?

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

Background

In accordance with the definition provided in California Public Resources Code Section 12220(g), "forest land" is land that can support, under natural conditions, 10 percent native tree cover of any species, including hardwoods, and that allows for the preservation or management of forest-related resources, such as timber, aesthetic value, fish and wildlife, biodiversity, water quality, recreational facilities, and other public benefits.

"Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.

Existing Resources

As described above, the City of Mill Valley has zoned the Alto Bowl Preserve as Open Area (OA). This zoning prohibits all uses that are either not permitted or conditional uses and specifically identifies commercial woodcutting or logging as a prohibited use (City of Mill Valley, 2017). The preserve is primarily open grasslands and does not have extensive timber resources.

Project Impacts

The proposed projects would not affect timberland, areas used for timber production, or other similar forestland. The MCOSD manages the Alto Bowl Preserve for habitat protection and recreational use and not for any timber or forest uses. Therefore, the proposed project would not impact forestland.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of 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 concludes that:

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 (MCOSD, 2014a, p. 14-8).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect timberland, areas used for timber production, or other similar forestland. The MCOSD manages the Alto Bowl Open Space Preserve for habitat protection and recreational use and not for any timber or forest uses. Therefore, the proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line trails is consistent with the circumstances described in the RTMP EIR and the proposed trail improvements are consistent with the EIR's assessment of timberland impacts. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new information on timber resources within the Alto Bowl Open Space Preserve that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

As discussed above, there is no farmland or forestland at the Alto Bowl Preserve. The recreational use of roads and trails are generally consistent with grazing or other agricultural or forestry uses. The land uses that surround the preserve are almost exclusively residential uses and there is no agricultural or timber uses near the preserve.

Project Impacts

As there is no farmland or forestland at the Alto Bowl Open Space Preserve, the project would have no impact regarding the conversion of farmland.

Relationship to the RTMP

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

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 (MCOSD, 2014a, p. 14-9).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not result in other changes in the existing environment that could result in the conversion of agricultural or timberland. Therefore, the proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. There are no new or changed circumstances resulting in new significant or substantially more severe impacts. There is no new

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information on agricultural or timber resources within the Alto Bowl that is of substantial importance requiring new analysis or verification.

D. AIR QUALITY

Environmental Issue Area: Would the project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Conflict with or obstruct implementation of the applicable air quality plan?	Section 5.2.4 Page 5-13	No	No	No	Yes
b. Violate any air quality standard or contribute substantially to an existing or Projected air quality violation?	Section 5.2.4 Page 5-15	No	No	No	Yes
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 which exceed quantitative thresholds for ozone precursors)?	Section 5.2.4 Page 5-15	No	No	No	Yes
d. Expose sensitive receptors to substantial pollutant concentrations?	Section 5.2.3 Page 5-12	No	No	No	Yes
e. Create objectionable odors affecting a substantial number of people?	Section 5.2.3 Page 5-12	No	No	No	Yes

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

Background

The ambient air quality in a given region depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere or the emissions of a pollutant or contaminant. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter (µg/m³). Emissions are typically expressed as grams per mile, pounds per day, or tons per year.

Marin County is part of the nine county San Francisco Bay Air Basin. Air quality in the region is affected by natural factors such as proximity to the Bay and ocean, topography, and meteorology,

as well as proximity to sources of air pollution. The Bay Area is characterized by its Mediterranean type climate with warm dry summers and cool wet winters.

Existing Resources

The most recently adopted air quality plan for the San Francisco Bay Area is the Bay Area 2010 Clean Air Plan (2010 CAP). The 2010 CAP is an update to the Bay Area Air Quality Management District (BAAQMD)'s 2005 Ozone Strategy to comply with state air quality planning requirements. The 2010 CAP also serves as a multi-pollutant air quality plan to protect public health and the climate. The 2010 CAP control strategy includes revised, updated, and new measures in the three traditional control measure categories, including stationary source measures, mobile source measures, and transportation control measures. In addition, the 2010 CAP identifies two new categories of control measures, including land use and local impact measures, and energy and climate measures (BAAQMD, 2010).

Project Impacts

BAAQMD recommends that the agency approving a project where an air quality plan consistency determination is required analyze the project with respect to the following questions: 1) does the project support the primary goals of the air quality plan?; 2) does the project include applicable control measures from the air quality plan?; and 3) does the project disrupt or hinder implementation of any 2010 CAP control measures? If all the questions are concluded in the affirmative, BAAQMD considers the project consistent with air quality plans prepared for the Bay Area (BAAQMD, 2012). Any project that would not support the 2010 CAP goals would not be considered consistent with the 2010 CAP, and if approval of the project would not result in significant and unavoidable air quality impacts after the application of mitigation, then the project would be considered consistent with the 2010 CAP.

As presented in the subsequent impact discussions, the proposed project would not result in new long-term operations-related emissions and construction-related emissions would be short-term and less than significant; therefore, the project would support the primary goals of the 2010 CAP. As mentioned above, projects that incorporate all feasible air quality plan control measures are considered consistent with the 2010 CAP. The project incorporated Policy SW.27, and therefore, the proposed project would support the primary goals of the 2010 CAP and it would not disrupt or hinder implementation of any 2010 CAP control measures. Therefore, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR states that implementation of the plan would not conflict with the goals of the 2010 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 would be applicable to construction equipment and would reduce emissions from 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:

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

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construction equipment that meets these criteria, if available (MCOSD, 2014b, p. 4-17).

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

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, p. 5-15).

Applicable Policies and BMPs

Table 4: Air Quality Policies and BMPs

Policies and BMPs	Description
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
BMP 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.
BMP 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.
BMP 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.

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Policies and BMPs	Description
BMP Air Quality-4, Dust Control during Construction in Sensitive Resource Areas	<p>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:</p> <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 windbreaks, or plant trees/vegetative windbreaks, 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.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not result in changes to the existing environment that could result in conflicts with or obstruct implementation of the 2010 Clean Air Plan. Therefore, the proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The projects are consistent with the circumstances described in the RTMP EIR and there is no new information on air quality resources that would affect the Alto Bowl Open Space Preserve, and the project would not require new analysis or verification.

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

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)?

Background

Air quality studies generally focus on five pollutants that are most commonly measured and regulated: CO, O₃, NO₂, SO₂, and suspended particulate matter, i.e., PM₁₀ and PM_{2.5}. In Marin County, ozone and particulate matter are the pollutants of greatest concern, as measured air pollutant levels exceed these concentrations at times.

Ground level ozone, often referred to as smog, is not emitted directly, but is formed in the atmosphere through complex chemical reactions. Fortunately, ozone is not a pollutant that adversely affects Marin County; however, emissions from motor vehicle use in Marin County contribute to high ozone levels in other parts of the Bay Area. Motor vehicles are the largest source of ozone precursor emissions (i.e., nitrogen oxides [NO_x] and reactive organic gases [ROG]) in the Bay Area. The Bay Area is currently classified as a federal and state nonattainment area for ozone.

Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles ten microns or less in diameter are defined as “respirable particulate matter” or “PM₁₀.” Fine particles are 2.5 microns or less in diameter (PM_{2.5}). These particulates can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most

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particulate matter found in the area is emitted either directly or indirectly by motor vehicles, industry, construction, agricultural activities, and wind erosion of disturbed areas. Most PM_{2.5} is comprised of combustion products such as smoke or formed in the atmosphere from regional emissions of NO_x. There are many sources of PM₁₀ emissions, including combustion, industrial processes, grading and construction, and motor vehicles. The greatest quantity of PM₁₀ emissions associated with motor vehicle uses is generated by re-suspended road dust. Reductions in motor vehicle miles traveled are necessary to reduce PM₁₀ emissions, rather than changes to motor vehicle technology. Wood burning in fireplaces and stoves is another significant source of particulate matter, primarily PM_{2.5}.

Existing Resources

The west coast and southern portions of Marin County are often subject to cool marine air and substantial fog. Temperatures in these areas remain steady through the year because of the nearby ocean. The eastern side of Marin County is warmer and has less fog, due in large part to its distance from the ocean. The extra distance from the ocean allows the marine air to be heated before arriving at eastern Marin cities. Prevailing winds throughout the county are generally from the northwest, with wind speeds highest along the west coast. Annual rainfall in the mountains is generally higher than in most parts of the Bay Area, averaging 37 to 49 inches. The majority of rainfall across the county occurs November through March (BAAQMD 2017a).

Air quality in Marin County is generally very good and with the exception of PM₁₀ and PM_{2.5}, the San Rafael air quality monitoring station has not reported any exceedances of ambient air quality standards over the past five years. The MCOSD confirmed this conclusion by reviewing current air quality data (BAAQMD, 2017b).

Project Impacts

The proposed project would result in criteria pollutant emissions during both construction and operation of the project. Construction of the project would use heavy equipment to install water-control features, construct re-routes, and decommission abandoned trail segments and social trails. As described in the project description, heavy equipment would operate over eight weeks, at least four days a week, and approximately eight hours a day. The project would also require employee trips driving to and from the project site during construction. Over the anticipated eight weeks of construction, a maximum of approximately 128 round trips would be associated with employees, assuming conservatively that each drives separate vehicles each day to and from the site. Operation of the project would occur as described in the project description and would result in criteria pollutant emissions from trail users driving to and from the Alto Bowl Open Space Preserve and from regular maintenance.

To determine the significance of the project's impact related to its potential to cause or contribute to an air quality standard violation, Marin County uses the screening criteria provided in the 2010 CEQA Air Quality Guidelines. The BAAQMD CEQA Air Quality Guidelines do not have specific screening criteria for a project identical to the proposed project. However, Table 3-1 of those guidelines entitled "Criteria Air Pollutants and Precursors and Greenhouse Gas (GHG) Screening Level Sizes" shows that, for a "city park," the operational criteria for pollutant screening size would be 2,613 acres, the operational GHG screening size would be 600 acres, and the construction criteria for pollutant screening size would be 67 acres for particulate matter with particles having a diameter of 10 micrometers or less (PM₁₀).

The proposed project would entail disturbance of no more than about 0.29 acre for the new trail construction and about the same acreage for decommissioning the existing trail. Thus, in total, the

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project would disturb about 0.46 acre. The project would be below the screening criteria identified for work within a city park. Emissions resulting from operation would be less than significant as associated emissions would be similar to baseline conditions.

Consistent with the RTMP, the MCOSD would implement the required BMPs Air Quality 1-4. With incorporation of these BMPs into the projects and the low-impact nature of the proposal, the improvements to the network of trails within the Alto Bowl Preserve would result in similar impacts to that described in the RTMP EIR. Therefore, the proposed project would be consistent with the air quality analysis contained in the RTMP EIR and would not require additional mitigation measures.

Based on BAAQMD guidance, a project's emissions would be considered to have a significant cumulative impact if a project would exceed the significance thresholds. As presented in discussion b) above, short-term construction emissions associated with the proposed project would be less than significant with implementation of applicable BMPs and the project would not result in substantial long-term operational emissions. Therefore, neither construction nor operation of the project would be cumulatively considerable and this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concluded that projects implemented under the RTMP would generate minor impacts to air quality during construction and from vehicles used to access the site for recreational purposes during operation. The RTMP concludes that this impact would not be significant because:

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.

...

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 (MCOSD, 2014a, pp. 5-16 – 5-17).

Applicable Policies and BMPs

The project incorporates all of the air quality BMPs and policies listed in the RTMP, and no additional mitigation measures are necessary. For a complete description of applicable policies and BMPs, see Table 4 above.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not result in changes to the existing environment that could result in a violation of an air quality standard or contribute substantially to an existing or projected air quality violation. The primary source of air quality impacts would be from construction of the trail improvements and the project would implement Policy SW-27 and BMPs Air Quality 1-4 to reduce these emissions. The project would have a less than significant impact, and therefore, would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. Cumulative air quality impacts would also, therefore, be less than significant. The projects are consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information on air quality resources that would affect the Alto Bowl Preserve, and therefore, the project would not require new analysis or verification.

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

Background

Construction equipment can produce substantial amounts of diesel particulate matter (DPM), which was identified by the California Air Resources Board as a toxic air contaminant (TAC) in 1998. The dose to which receptors are exposed is the primary factor affecting health risk from exposure to TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects (OEHHA, 2003). However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the project.

Existing Resources

Under current conditions, DPM emissions may result from regular maintenance activities such as mowing and weeding, including from rangers and maintenance staff driving to and from the preserve. The closest sensitive receptors to the proposed project site would be Edna Maguire School, located over 2,000 feet south of the project site, and residences located within approximately 50 feet of the project site and 250 feet from project activities.

Project Impacts

Construction of the project would generate DPM emissions during the eight-week construction period. DPM emissions that would be generated in the vicinity of any one sensitive receptor location would be very limited as the project would proceed in a linear fashion and would mainly take place in the interior of the preserve, away from neighboring residences. Edna Maguire School is located over 2,000 feet downhill from the project site and would not be affected by DPM emissions. DPM emissions near the residences would be very limited as a result of the small size of equipment used

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to construct trail projects compared to a typical construction project. Additionally, construction activities would be located about 250 feet away from the closest residence and would be limited to a very short construction period (eight weeks total for the entire project). Policy SW-27 would support the use of equipment producing reduced DPM though the use of particulate filters and electric motors and would ensure that emissions are reduced to the maximum extent possible.

Long-term operation of the proposed project would not result in new TAC emissions. Regular operation and maintenance emissions would be similar to existing emissions from Ranger trucks driving to patrol the site and maintenance crews and equipment. The proposed project would not result in any long-term or chronic exposure to substantial pollution concentrations.

Relationship to the RTMP

The RTMP EIR concludes that the RTMP would have “No Impact” on the potential to expose sensitive receptors to substantial pollutant concentrations because:

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, p. 5-12).

Applicable Policies and BMPs

The project would incorporate Policy SW.27 and BMP Air Quality 1. For a complete description of applicable policies and BMPs, see Table 4 above.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. The proposed project would generate short-term, temporary TAC emissions during construction and long-term indirect emissions from on-road vehicles during operation. These emissions would not represent a measurable increase over existing conditions. The proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, and there is no new information on air quality resources that would affect the Alto Bowl Preserve that is of substantial importance requiring new analysis or verification.

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

Background

Odors often consist of a mixture or blend of various odorous and/or volatile organic compounds. A human’s odor detection sensitivity varies from person to person and also differs between genders and among age groups. Since the detection of odors is widely variable, the odor intensity (the

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perceived strength of the odor sensation) is also variable among people. Odors are not regulated under the Federal or State Clean Air Acts; however, they are considered under CEQA.

Existing Resources

There are currently no sources of odor at the Alto Bowl Open Space Preserve, such as wastewater treatment plants or other processing facilities. Minor odors may result from regular maintenance equipment being used at the site.

Project Impacts

Diesel equipment used to construct the project may emit objectionable odors associated with combustion of diesel fuel. These emissions may be noticeable from time to time by nearby residents and other receptors. However, the projects are a linear alignment and construction would not remain in any one location for long and the emissions are not likely to have adverse effects on surrounding uses to such an extent that people would file odor complaints due to the limited extent of construction and small number of equipment required to perform the work. After construction, the project would not include any sources of odors that would cause problems for surrounding uses because operation would only require maintenance with equipment on a limited basis (less than annually). The project's odor impact, therefore, would be less than significant, and it would not require additional mitigation measures.

Relationship to the RTMP

The RTMP EIR concludes that the plan would have "No Impact" on the potential to create objectionable odors because:

While diesel exhaust from construction activities may generate odors, the level of overall emissions would be low, and the duration of emissions would be temporary. Further, implementation of the RTMP project would not change the amount or frequency of the generation of odors from either construction or operation and there would be no increase in objectionable odors (MCOSD, 2014a, p. 5-12).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not create objectionable odors affecting a substantial number of people. Although projects equipment would create diesel emissions that may be objectionable, this impact is limited to the project site and would be temporary and less than significant. Odors would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. There are no changed circumstances resulting in new significant or substantially more severe impacts and no new information on odors that would affect the Alto Bowl Preserve that is of substantial importance requiring new analysis or verification.

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E. BIOLOGICAL RESOURCES

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Section 6.2.3 Page 6-52	No	No	No	Yes
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Section 6.2.3 Page 6-89	No	No	No	Yes
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?	Section 6.2.3 Page 6-97	No	No	No	Yes
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Section 6.2.3 Page 6-106	No	No	No	Yes
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Section 6.2.3 Page 6-108	No	No	No	Yes

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
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?	Section 6.2.3 Page 6-52	No	No	No	NA

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?

Background

This assessment of potential impacts on biological resources relies on a biological report prepared by the MCOSD’s Natural Resources staff (MCOSD, 2017). This evaluation contains detailed descriptions of existing conditions and conclusions regarding presence or absence of sensitive biological resources, and is available for review at the offices of the MCOSD. 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.

Special-status species² are plants and animals with legal protection under the state and/or federal Endangered Species Acts³ or other similar regulations. Also included are other species that the scientific community and trustee agencies considers rare enough to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species with legal protection under the state and federal Endangered Species Acts often represent major constraints to development; particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species.

² Special-status species include designated rare, threatened, or endangered and candidate species for listing by the California Department of Fish and Wildlife (CDFW); designated threatened or endangered and candidate species for listing by the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA Fisheries); species considered rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those plant species identified on lists 1A, 1B, and 2 in the Inventory of Rare and Endangered Plants of California; and possibly other species that are sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on list 3 in the California Native Plant Society Inventory or identified as California Species of Special Concern (SSC) by CDFW.

³ The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall use their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Existing Resource

The biological report identified 44 special-status plant species that could occur within the project area, with five of these species having a moderate potential to occur. These plants include Napa false indigo (*Amorpha californica* var. *napensis*), California bottle-brush grass (*Elymus californicus*), thin-lobed horkelia (*Horkelia tenuiloba*), woolly-headed lessingia (*Lessingia hololeuca*), and marsh microseris (*Microseris paludosa*). The California Native Plant Society (CNPS) lists the Napa false indigo, thin-lobed horkelia, and marsh microseris on the California Rare Plant Ranking system (formerly known as CNPS List) as California Rare Plant Rank 1B, which are rare throughout their range with the majority of them endemic to California (CNPS, 2017). The CNPS lists the woolly-headed lessingia as a Rank 3 and the California bottle-brush grass as a Rank 4.3. The CNPS defines Rank 3 as plants about which more information is needed and Rank 4 is a watch list for plants of limited distribution or infrequent throughout a broader area in California, with the .3 meaning that the plants are not very threatened in California (CNPS, 2017). The MCOSD did not identify any of these species during its biological surveys. The remaining 39 species that have a potential to occur either have low potential to occur within the project area or are not likely to occur, and none of these species have been documented within the preserve. There are no plant species with a high potential to occur within the project area.

The biological report also identified a total of 32 special-status wildlife species have the potential to occur within the project area. The MCOSD has observed three of these species within the Alto Bowl Open Space Preserve and an additional four species have high potential to occur within the project area. The remaining species either have low potential to occur or are not likely to occur. The project area also does not include any designated critical habitat for any listed endangered or threatened species. The three species that have been observed within the Alto Bowl Open Space Preserve are all bird species and include Cooper's hawk (*Accipiter cooperi*), sharp shinned hawk (*Accipiter striatus*), and white-tailed kite (*Elanus leucurus*). The Cooper's hawk and the sharp-shinned hawk are on the California Department of Fish and Wildlife (CDFW) Watch List (MCOSD, 2017), which consists of taxa that were previously listed as Species of Special Concern (SSC), but no longer meet the SSC criteria and for which there is concern and a need for additional information to clarify status (CDFW, 2017a). The other species that have a high potential to occur in the project area include grasshopper sparrows (*Ammodramus savannarum*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). The CDFW lists all of these species as SSC, with the Townsend's big-eared bat also listed as a candidate species for listing under the California Endangered Species Act.

The biological report also states that the project sites could support nesting habitat for many common birds and mammals. Since the project would occur during nesting/breeding season, it has the potential to affect these resources. The federal Migratory Bird Treaty Act and the State Fish and Game Code protect bird nests that are in active use. Birds could establish nests in advance of construction or could have been located some distance from the trail but still within a close enough distance that tree removal and other construction activities could disturb established nests.

Project Impacts

As described above, there is a potential for 12 special-status plant and wildlife species to be present at the site, three of which have been observed within the preserve. The project could disturb these species if they are present during construction. Impacts could range from direct loss of an individual plant or nest through vegetation removal, or other disturbances from construction activity. Tree and vegetation removal could also result in an inadvertent loss of the nest, eggs, or young of more common species if initiated during the active nesting season, and would be a violation of the Migratory Bird Treaty Act and Fish and Game Code.

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Numerous BMPs would be implemented as part of the project to reduce project impacts to biological species, see Table 5 below. To avoid impacts to special-status plants, additional preconstruction surveys would be implemented to determine if grassland or woodland habitat is occupied by any special status plants with potential to occur in the project area, as described in BMP Special-Status Plants-2: Avoidance and Protection of Special-Status Plant Species near Road and Trail Management Projects. Surveys would be conducted within 14 days of project commencement and additionally during periods when special-status plants are detectable (see Tables 2 and 3 above). In addition, BMP Special-Status Plants-8: Worker Awareness Training will be conducted to inform field personnel regarding special-status plants detected or those with moderate to high potential to occur.

Avoidance measures would be implemented during bird nesting season and would follow BMP Special-Status Wildlife -3. After communicating with USFWS and reviewing recent data, bird nesting season for raptors in Marin County occurs from January 1 – July 31 and for passerines (i.e. song birds) from March 1 – July 31. If construction takes place during the nesting season, impacts to individual nesting birds are possible. Impacts would be avoided through construction avoidance during the bird nesting season or through a pre-construction nesting bird survey. Therefore, it is the proposed projects would result a less than significant impact regarding the direct loss of individual birds.

The project area has the potential to support two special-status bat species: pallid bat and Townsend's big eared bat. Since the project involves removing large trees or branches of trees, impacts to individual bats are possible. Avoidance measures would be implemented throughout the year to reduce potential impacts and would follow BMP Special-Status Wildlife -2. These pre-construction surveys will survey for roosting bats on trees or large branches that have suitable bat roosting habitat and are designated for removal. Therefore, it is unlikely that the proposed projects would have a less than significant impact regarding the loss of individual bats.

Potential impacts to American badgers will also be avoided through pre-construction surveys (BMP Special-Status Wildlife -2), so it is unlikely that the proposed projects would result in the direct loss of individual badgers. To ensure that no special-status species will be directly or indirectly impacted during construction, a worker awareness training will be conducted to all workers prior to construction and trash will be properly disposed of (BMPs Special-Status Wildlife -8, -11, and -12). If special-status species are observed during construction, Marin County Parks resource department will be notified immediately. In addition, BMP Special-Status Wildlife -10 (Relocation of Special-Status Species) will be used when necessary to inform the appropriate regulatory agency and get a qualified biologist to relocate the species. Following construction of the projects, inspections of the area should be conducted to ensure habitats have not been significantly altered in the long-term to affect special-status species (BMP Special-Status Wildlife -13).

The project area does not support any suitable nesting habitat for northern spotted owls. However, part of the project area falls within the 0.25 mile buffer around past confirmed nest sites. The project area that is included in that buffer should follow BMP Special-Status Wildlife - 4, such that the project will occur after the USFWS noise restrictions from February 1 – July 31. Or, if the 0.25 mile buffer around the current nest is determined to be outside the project area, the project can occur at any time.

Although dusky-footed woodrats have no individual legal protection, removal of active nests will be avoided when possible to protect the northern spotted owl primary prey source. If removal is unavoidable, the nest should be flushed (by a qualified wildlife biologist) of woodrats and be moved outside the impact area. Avoidance of woodrat nests is expected for the proposed project, so direct impacts to individuals or nests are unlikely to occur.

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It is unlikely that the ongoing recreational use of these improved trails would have significant impacts on these resources. Both hikers and equestrians actively use the Bob Middagh and Gas Line trails, and the projects to improve these trails would not substantially alter the existing use pattern. The revised designation of the Bob Middagh Trail to allow bicycles may increase use, but this change would not likely have a significant impact on these resources. Bicycle use is similar to the existing activities within the preserve and any disturbance to wildlife would be similar to existing hiking and equestrian uses. Operation of the projects would result in a less than significant impact.

Relationship to the RTMP

The RTMP EIR considers the potential impacts on special-status species from the implementation of the plan. The RTMP EIR concludes that at a program level, the plan will not have significant impacts on any special status species. The EIR states that:

... 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 ... would act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP BMPs ... 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 ... would result in further protection of biological resources from adverse effects caused by management actions associated with the RTMP by establishing procedures and Marin County Open Space District 6-89 Road and Trail Management Plan performance standards for sensitive biological resources to be followed in the design, construction, and maintenance of existing and new trails. ... Road and trail design and operational standards identified in [the RTMP] 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.

Further, the RTMP provides for the implementation of a multi-year wildlife monitoring program to address information gaps. The MCOSD is implementing a multi-year monitoring program with the goal of enhancing MCOSD's land management and stewardship decisions to incorporate the collection, sharing, and analysis of wildlife data. Methods for monitoring wildlife may include user-submitted data, volunteer efforts, monitoring cameras, and other means as appropriate. This wildlife data will also help to guide the implementation of BMPs and assist the MCOSD in its prioritization and ranking of roads and trails (MCOSD, 2014a, pp. 6-89 – 6-90).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to affect special-status plants and wildlife and other nesting birds. The RTMP identifies all of the species potentially affected by these proposed trail projects as potentially present within the open space preserves. The biological report for these projects did not identify any new or more severe impacts beyond those considered in the RTMP EIR. This report also concluded that with the implementation of the policies and BMPs identified in the RTMP, the projects will avoid any significant impacts to special-status species and other nesting birds.

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Applicable Policies and BMPs

The RTMP identifies numerous policies and BMPs that address potential impacts to special-status species and nesting birds. The MCOSD incorporated the relevant policies and BMPs into the proposed projects (Table 5). To address potential impacts to special-status plants and animals, the projects incorporate BMPs Special-Status Wildlife-2 and Special-Status Plants-2, from the RTMP. These BMPs requires a qualified biologist to conduct to preconstruction surveys within two weeks of implementing the project to determine if any special-status species are presents within or adjacent to the project area. If any of these species are present, the BMP requires the MCOSD to avoid impacts. These avoidance measures would include establishing buffers around any active nesting, denning, or other breeding areas until those areas are clear of the species. With respect to sensitive vegetation, the BMPs require the MCOSD to: (1) avoid occupied habitat; (2) wait to the plants have flowered and set seeds; (3) establish a 100-foot the plant populations; (4) mark special-status plant populations with flagging or temporary fencing; (5) prevent unnecessary vehicular and human intrusion into the habitat from construction, maintenance, and decommissioning activities; (6) prohibit or restrict equipment refueling, fluid leakage, equipment maintenance, and road surfacing activities near special-status plant populations; (7) install erosion control measures; and/or (8) conducting worker training.

The BMP Special-Status Wildlife-3 (Seasonal Restrictions During Bird Nesting Season) from the RTMP calls for avoiding construction during the nesting season (February 1 through August 31), or conducting preconstruction surveys and implementing appropriate restrictions if the biomonitor finds any active nests. Since the projects overlap the bird-nesting season, the MCOSD would implement survey requirements of BMP Special-Status Wildlife-3. The avoidance and survey requirements of this BMP would serve to address any potential adverse impacts on nesting birds, if present near proposed project.

Table 5 below identifies all of the relevant RTMP policies and BMPs incorporated to the proposed projects.

Table 5: Biological Resources Policies and BMPs

Policies and BMPs	Description
Countywide Plan 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
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.
Countywide Plan 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.
RTMP 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.
RTMP 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.
RTMP Policy SW.24, Minimize	In designating the system of roads and trails, the MCOSD will minimize their adverse effects

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Policies and BMPs	Description
Intrusions into Larger Contiguous Habitat Areas and Wildlife Corridors	on sensitive vegetation, as well as, habitat connectivity and migration corridors for all native species of wildlife.
BMP General-2, Modify Construction-Related Vegetation Management Methods in and near Wetlands, Riparian Vegetation	<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).
BMP 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>
BMP 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 nonbreeding 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.

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Policies and BMPs	Description
BMP 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. 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 non-sensitive as defined by the California Environmental Quality Act and other applicable laws and regulations.</p>
BMP 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>
BMP 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> <p>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.</p> <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.
BMP Special-Status Wildlife-7, Protection of Fish Habitats	<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.

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Policies and BMPs	Description
BMP Special-Status Wildlife-8, Worker Awareness Training	<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.
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.
BMP 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>
BMP 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. 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.

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Policies and BMPs	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 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>
<p>Special-Status Plants-7 Revegetation with Native, Geographically Appropriate Plant Species</p>	<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 over collection 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.
<p>BMP Special-Status Plants-8, Worker Awareness Training</p>	<p>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:</p> <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
<p>BMP Special-Status Plants-12, Ripping and Recontouring Roads</p>	<p>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.</p>

Conclusion

As described above, the proposed project has the potential to adversely affect special-status plant and animal species and nesting birds. The RTMP EIR identified the potential for projects implemented under the plan to affect these resources and identified policies and BMPs to avoid these potential impacts. In evaluating potential impacts from the proposed project, the MCOSD's biological report concluded that there are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts to special-status species provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Background

The CDFW has established a list of natural communities for California. The CDFW considers these communities part of the natural heritage conservation triad, along with plants and animals of conservation significance. Since 1999, the CDFW Vegetation Classification and Mapping Program has undertaken the classification and mapping of vegetation throughout the state and has assumed the role of standardizing vegetation nomenclature for California to comply with the National Vegetation Classification System (CDFW, 2017b). One purpose of the vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Ranking of alliances according to their degree of imperilment (as measured by rarity, trends, and threats) follows NatureServe's Heritage Methodology, in which all alliances are listed with a G (global) and S (state) rank. For alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled. A question mark (?) denotes an inexact numeric rank due to insufficient samples over the full expected range of the type, but existing information points to this rank (CDFW, 2017c).

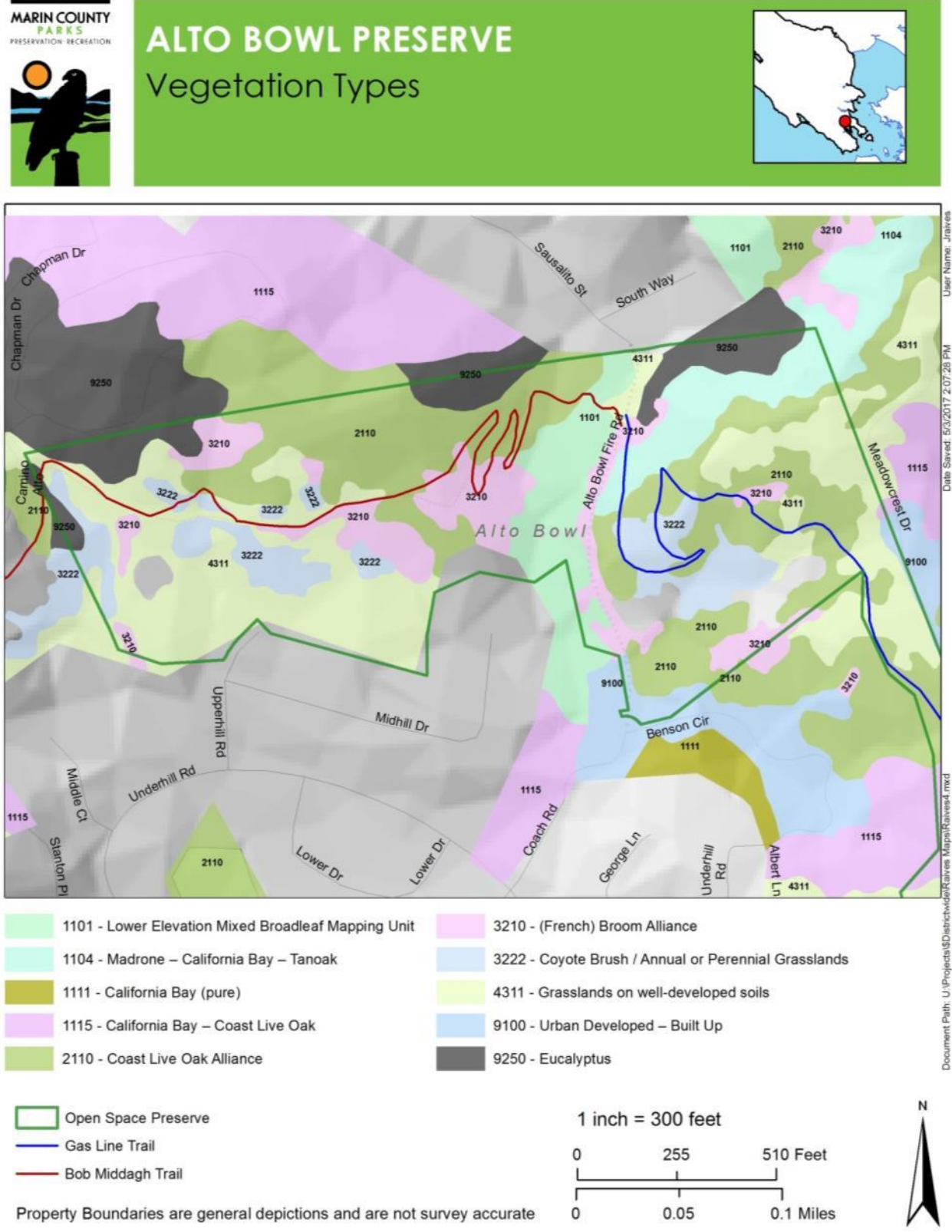
Existing Resources

A total of 11 vegetation-mapping units occur within the project study area, which includes both the existing and proposed trails and 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 sites and the areas surrounding it include the following vegetation communities:

- Lower elevation Mixed Broadleaf Woodland
- Madrone – California Bay – (Tanoak) Forest
- California Bay-Coast Live Oak
- Coast Live Oak Alliance
- Coast Live Oak/grass-poison oak
- Coyote brush/annual or perennial grasslands (open stand)
- Coyote Brush-Mixed Shrub/Grass
- Grasslands on well-developed soils
- (French) Broom Alliance
- Urban developed and built up

- Eucalyptus

Figure 19: Alto Bowl Preserve Vegetation Types



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In addition, there is riparian habitat along Sutton Manor Creek. Both this riparian habitat and the Madrone and California Bay and Tanoak Alliance are the only vegetation communities within the project area that the CDFW identifies as a rare vegetation community.

Project Impacts

The existing trail crosses Sutton Manor Creek twice, and the project includes replacing the existing culverts, which are damaged and are too small. This replacement involves excavating the trail and area around the culverts, removing and replacing the existing culverts, adding rock rip rap, replacing the fill, and rebuilding the trail approximately in the same location. One of the culverts requires the removal of a eight to ten inch DBH arroyo willow (*Salix lasiolepis*). In addition, the MCOSD may have to trim some of this vegetation in order to install the new culverts. The removal of riparian tree and additional limbs will not have a significant impact on the riparian community. The riparian habitat at this location is dominated by arroyo willow and is fairly large. The loss of one tree and several limbs will not result in a significant change and it will not affect the biodiversity or habitat values of the area. Therefore, this impact would not be significant. The project does not include any other facilities or trail modifications in the riparian habitat.

Almost all of the Bob Middagh Trail is located on grasslands and other habitats that CDFW has not identified as a sensitive natural community. A portion of the Gas Line Trail traverses Madrone and California Bay and Tanoak Alliance. The projects would not affect the madrone and California bay and tanoak vegetation types because the MCOSD would not remove trees within this vegetation type. Any disturbance to understory vegetation within the area would not significantly impact the quality or quantity of the woodland as a whole (MCOSD, 2017).

Relationship to the RTMP

The RTMP EIR considers the potential impacts on special-status species from the implementation of the plan. The RTMP EIR concludes that at a program level, the plan will not have significant impacts on sensitive natural communities. The EIR states that:

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 Tables 6-4 through 6-8 [of the RTMP EIR] and would be incorporated as appropriate during implementation of the RTMP.

...

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 ... would

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act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP policies ... 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 ... 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.

...

These policies, BMPs, and programs encourage visitors to use the MCOSD road and trail network responsibly, thereby avoiding unanticipated impacts to wildlife and natural communities. These measures restrict access to off-trail areas, set expectations of proper trail use and conduct, and focus visitor use on a formally designated system of roads and trails. As a result, no additional significant negative impacts to trails or the surrounding environments from pedestrian traffic, mountain biking, or horseback riding are anticipated (MCOSD, 2014a, p. 6-95 – 6-96).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to affect sensitive natural communities. However, the RTMP also identified policies and BMPs that address this potential impact. In considering the impacts to natural communities, the MCOSD, in its biological report, concluded that the project would not result in any new or more severe impacts beyond those considered in the RTMP EIR. This report also concluded that with the implementation of the policies and BMPs identified in the RTMP, the projects would avoid any significant impacts to sensitive natural communities.

Applicable Policies and BMPs

The RTMP identifies numerous policies that address potential impacts to sensitive natural communities. The MCOSD incorporated the relevant policies into the proposed projects (Table 5). To address potential impacts to special-status plants and animals, the projects incorporate RTMP Policy SW.22 and Countywide Plan Policies BIO-4.k, BIO-4.14, and TRL-2.a. Collectively, these policies require the MCOSD to avoid impacts sensitive habitats. The projects implement these policies by minimizing impacts to the sensitive natural communities. These trails would not result in significant impacts to the loss of habitat and do not include any removal of trees within the sensitive natural communities. Additionally, the proposed projects include decommissioning almost 2,500 feet of existing trail and the MCOSD would restore the habitat of these areas consistent with the requirements of the RTMP.

Conclusion

As described above, the proposed project has the potential to adversely affect sensitive natural communities. The RTMP EIR identified the potential for projects implemented under the plan to affect these resources and identified policies to avoid these potential impacts. In evaluating

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potential impacts from the proposed project, the MCOSD's biological report concluded that there are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts to sensitive natural communities provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Background

Wetlands support vegetation adapted to live in saturated soil as a result of periodic or permanent inundation by surface or groundwater. Wetlands are important features on a regional and national level due to their inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. The U.S. Army Corps of Engineers (Corps), CDFW, and Regional Water Quality Control Board (RWQCB) have jurisdiction over modification to riverbanks, lakes, streams channels, and other wetland features. Section 404 of the federal Clean Water Act provides the Corps with authority to regulate the discharge of dredged or fill material waters of the United States. The RWQCB has jurisdiction through Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Act. Sections 1600-1607 of the State Fish and Game Code provide CDFW authority to regulate the disruption of the natural flow or alterations of the channel, bed, or bank of any lake, river, or stream.

Existing Resource

The existing alignment of the Bob Middagh Trail crosses two forks of Sutton Manor Creek, which supports a substantial riparian corridor. Both forks of the creek are under the jurisdiction of the Corps, RWQCB, and CDFW. The riparian corridor is also under the jurisdiction of CDFW. The MCOSD did not identify any other wetlands or jurisdictional waters within the project areas.

Project Impacts

As described in the project reports (Parks, 2017a), the Bob Middagh Trail includes replacement of two existing culverts. The replacement of the culverts will require excavating around and removing the existing culverts, including portions of the existing trail, to install the new ones. The MCOSD will replace the trail more or less in the same location as it crosses over the streams. However, the project does not include any major trail realignment or additional facilities within the stream corridor or riparian habitat. The new culverts are slightly larger (30-inch replaced with a 42-inch culvert, and 18-inch replaced with a 24-inch culvert) to have them adequately sized for the volume of water expected at these locations of the stream. The culvert replacement includes the installation of vegetated rock riprap around the new pipes and riprap at their outfalls. Since the new culverts are replacing existing ones, the project would not result in a loss of waters of the U.S. or state, and thus does not require mitigation. Additionally, the project incorporates the policies and BMPs, identified below, from the RTMP that address riparian, stream, and fish related issues. Additionally, the project includes measures, including compacting the disturbed soil around the culvert and installing riprap at the outfall, to reduce erosion.

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Relationship to the RTMP

The RTMP EIR concludes that projects implemented under the plan have the potential to have adverse impacts on federally protected wetlands. However, the RTMP concludes that this impact will not be significant. The EIR states that:

... 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 ... would act to reduce potential adverse impacts to biological resources from all development activities in the county, including roads and trails. New RTMP policies ... 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 ... that will result in further protection of wetland habitats from adverse effects. ... Road and trail design and operational standards ... 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 ... 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 (MCOSD, 2014a, p. 6-106).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to affect wetlands and other jurisdictional waters. The projects do not result in any new or more severe impacts beyond those considered in the RTMP EIR. This report also concluded that with the implementation of the policies and BMPs identified in the RTMP, the projects would avoid any significant impacts to wetlands or other jurisdictional waters.

Applicable Policies and BMPs

The RTMP identifies numerous policies and BMPs that address potential impacts to wetlands and other jurisdictional waters. The MCOSD incorporated the relevant policies and BMPs into the proposed projects (Table 5). The project would implement BMP General-2 in that the MCOSD would apply for permits from the respective state and federal agencies and implement appropriate erosion controls including compacting soils, installing riprap, and adding temporary measures, such as silt fencing or waddles, to prevent sedimentation into the creek. The MCOSD cannot avoid work in a 100-foot buffer around the stream, because the trail crosses the stream and the culverts require replacement. However, with the re-designed culverts, erosion control measures, and the general redesign of the trail to reduce erosion and make it hydrologically invisible, the project would not adversely affect the stream. The project would also incorporate the requirements of BMP Sensitive Natural Resources-1, which requires implementation of measures to reduce impacts to sensitive

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habitat, in this case riparian and stream habitat. BMP Special-Status Wildlife-7 requires consideration of bridges or arch culverts over the standard culvert pipe in fish bearing streams. The projects are located on the upper part of the watershed and the biological report did not identify any fish within this stream (MCOSD, 2017). Therefore, with the implementation of these BMPs and policies, the projects would not result in significant effects to wetlands or other jurisdictional waters and no additional mitigation is necessary.

Conclusion

As described above, the proposed project has the potential to adversely affect wetlands and other jurisdictional waters. The RTMP EIR identified the potential for projects implemented under the plan to affect these resources and identified policies and BMPs to avoid these potential impacts. In evaluating potential impacts from the proposed project, the MCOSD's biological report concluded that there are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts to wetlands and other jurisdictional waters provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Background

Wildlife corridors connect large patches of natural open space and allow for the movement and migration of animals and plants. Corridors are critical for the maintenance of ecological processes and viable populations through several ways, including: (1) the continual exchange of genes between populations, which help maintain genetic diversity; (2) the access to adjacent habitat areas they represent additional territory for foraging and mating; (3) allowing for greater carrying capacity; and (4) providing routes for colonization of new habitat lands following location population extinctions or habitat recovery from ecological catastrophes.

Habitat linkages are broader stretches of native habitat that allow for the movement of multiple species and maintain ecological processes. These linkages do not have to be continuous patches of habitat but can also be patches of habitat that still support movement from one patch to another to allow dispersal and movement. Habitat linkages reduce the adverse effects of habitat fragmentation that can lead to decreased gene flow for small animals, such as amphibians, reptiles, and rodents.

Native wildlife nursery sites are particular areas where specific species return yearly to breed, birth, and raise juveniles. For example, most salmonids require gravel beds in the upper reaches of a stream. There is a distinction between wildlife nursery sites and other breeding sites that are not linked to specific habitat conditions. In other words, a tree with a bird nest is not necessarily a wildlife nursery site.

Existing Resources

This small preserve (37.1 acres) is isolated from other open space areas by the existing housing and infrastructure, and has limited value as a wildlife corridor or habitat linkage. However, the preserve is isolated from the greater Mount Tamalpais area (including Camino Alto, Blithedale, Baltimore Canyon, and King Mountain Preserves, Mount Tamalpais State Park, Marin Municipal

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Water District watershed lands, and Golden Gate National Recreation Area) by Camino Alto, a heavily traveled two-lane road that connects Mill Valley and Corte Madera. Although the road is a deterrent for wildlife, many species are still able to access the greater Tamalpais area by crossing the road. The biological report did not identify any wildlife nursery areas within the Alto Bowl Preserve.

Project Impacts

The projects involve improving already existing trails or culverts and would not create additional fragmentation of habitat or habitat islands. The re-aligned portions of the project involve modifying small portions of the habitat. In addition, decommissioning trails would improve previously altered and disturbed habitat and potentially contribute to an increase in habitat quality. Wildlife access to the open space preserve would remain intact and no islands or fragments would be created within the preserve. Noise, construction equipment, and the presence of people during construction may temporarily limit wildlife access to some areas, but these impacts are temporary and would not result in any permanent direct impacts. After construction is completed, wildlife is likely to continue to use the open space preserve.

In addition, wildlife near the project sites have already acclimated to human activity along the trail alignment, and construction-related disturbance would not cause any significant impacts on wildlife movement activity in the surrounding area. Sutton Manor Creek is already affected by culverts and their replacement would not affect fish migration, because this portion of the creek is not a fish bearing stream. Additionally, since the preserve is surrounded on all sides by roads and residential development, the proposed trail work, including culvert replacement and trail realignments would not significantly alter wildlife movement patterns or cause more habitat fragments, and therefore, the project would not affect wildlife corridors or habitat linkages (MCOSD, 2017). In addition, since there are no wildlife nursery areas within the preserve, the projects would not have an impact on this resource.

Relationship to the RTMP

The RTMP EIR considers the potential impacts on wildlife corridors and nursery areas from the implementation of the plan. The RTMP EIR concludes that at a program level, the plan will not have significant impacts on these resources. The EIR states that:

... 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 ... 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. ... Design and operational standards ... 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 [the RTMP] would be followed by the MCOSD, its representatives, and project contractors as applicable and appropriate. Additionally,

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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 (MCOSD, 2014a, p. 6-89 – 6-90).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to affect wildlife corridors or nursery areas. The RTMP recognizes that the open space preserves have the potential to provide wildlife corridors and nursery areas. The biological report for these projects did not identify any new or more severe impacts beyond those considered in the RTMP EIR. This report also concluded that with the implementation of the policies and BMPs identified in the RTMP, the projects would avoid any significant impacts to wildlife corridors and nursery areas.

Applicable Policies and BMPs

The RTMP EIR identifies two policies that address potential impacts to wildlife corridors and nursery areas. The MCOSD incorporated the relevant policies into the proposed projects (Table 5). To address potential impacts to wildlife corridors and nursery areas, and the projects incorporate these policies. These policies require the MCOSD to avoid and minimize impacts on migratory corridors.

Conclusion

As described above, with the incorporation of the appropriate policies, the proposed projects do not have the potential to adversely affect wildlife corridors and nursery areas. The RTMP EIR identified the potential for projects implemented under the plan to affect these resources and identified policies to avoid these potential impacts. In evaluating potential impacts from the proposed project, the MCOSD's biological report concluded that there are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts to special-status species provided that the projects implement the relevant RTMP policies. The MCOSD has incorporated these measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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

Background

The County of Marin has established policies to protect natural resources in its general plan, the Marin Countywide Plan, including protection of Stream Conservation Areas (SCAs). In addition, the MCOSD has adopted policies to sensitive resources in the RTMP and through its Policy Review Initiative (MCOSD, 2005). Finally, the County has developed an ordinance to regulate the removal native trees. The Native Tree Preservation and Protection Ordinance (Chapter 22.27) of the Marin County Code establishes regulations for the preservation and protection of native trees in the non-agricultural unincorporated areas of the county by limiting tree removal in a manner that allows for reasonable use and enjoyment of private property. The purpose of the ordinance is to establish regulations for the preservation and protection of native trees. This ordinance applies only to "protected trees," generally prohibiting the removal of native trees between 6 and 10 inches in

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diameter (depending on species). The County's tree ordinance exempts tree removal by a public agency to provide for the routine management and maintenance of public land (County of Marin, 2012).

Existing Resources

Alto Bowl Preserve contains many native trees that meet the definition of protected or heritage trees. These include California bays, most native oak trees, and Pacific madrone. The protected tree sizes for these species are ten inches for California bay trees and six inches for most species of oaks and for the Pacific madrone. In addition, Sutton Manor Creek is an intermittent stream that meets the definition of a SCA, intermittent streams with at least 100 feet of riparian habitat.

Project Impacts

In general, the proposed projects would not conflict with any goals and policies of the 2007 Marin Countywide Plan or the MCOSD's RTMP or Policy Review Initiative related to the protection of biological resources. Measures discussed under sections (a) and (b) above ensure that the project would avoid impacts to special-status species. The following provides a review of the conformance of the proposed projects with relevant aspects of the 2007 Marin Countywide Plan, the County's Native Tree Preservation and Protection Ordinance, and relevant aspects of the MCOSD's RTMP.

As described above, the existing alignment of the Bob Middagh Trail crosses two forks of Sutton Manor Creek. The MCOSD is not proposing to change the alignment trail within the SCA. The only work proposed in the SCA is to replace two existing culverts, which is necessary because the culverts are undersized for the watershed and are no longer functioning properly. The MCOSD would also install vegetated riprap to protect the culverts and to reduce erosion at their outfalls. This replacement may require trimming of vegetation and removal of one arroyo willow within the SCA. The removal is necessary to install the new culvert and, as described under Biological Resources Criterion "b," this vegetation removal will not result in significant impacts to the riparian community.

To accommodate the proposed trail improvements, the MCOSD has determined that it would remove one eight to ten inch DBH arroyo willow and two non-native pine trees along the Bob Middagh Trail, which are not protected by the tree ordinance. Along the Gas Line Trail realignment, there is one eight-inch DBH coast live oak that may be removed during construction. The MCOSD would make every effort to avoid the trees. Even if the project requires the MCOSD to remove these protected trees, the impact would not be significant. The trees are located within an open space preserve that protects the vegetation and habitat of the area. Much of the preserve supports other oak and willow trees and the loss of an individual tree would not significantly affect the habitat values of the oak woodlands or riparian community. The projects also involve the decommissioning of 2492.2 feet of existing trails within areas that support oak trees. This restoration work would allow ample area to for the expansion of these trees.

Relationship to the RTMP

The RTMP EIR considers the potential impacts on native trees and SCAs. The RTMP EIR concludes that at a program level, the plan will not have significant impacts on any special status species. The EIR states that:

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. ... Implementation of the RTMP would assure compliance with the goals and requirements of these plans and regulations. Additionally, these policies would

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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. ... Road and trail design and operational standards ... would control erosion and drainage, and minimize impacts to sensitive resources. The water quality BMPs ... would act to maintain water quality for the benefit of biological resources. Similarly, the RTMP policy ... 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 (MCOSD, 2014a, p. 6-106).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR does not identify any significant conflicts with the County's or the MCOSD's policies or ordinances, if the individual projects incorporate relevant RTMP policies and BMPs. The projects do not result in conflicts with existing local policies or ordinances that result in any new or more severe impacts beyond those considered in the RTMP EIR. With the implementation of the policies and BMPs identified in the RTMP, the projects will avoid any significant impacts to special-status species and other nesting birds.

Applicable Policies and BMPs

The RTMP identifies several policies and BMPs that address potential conflicts with local ordinances. The MCOSD incorporated the relevant policies and BMPs into the proposed projects (Table 5). The MCOSD has incorporated the policies from the 2007 Marin Countywide Plan related to SCAs as governing policies into the RTMP. As listed in the 2007 Marin Countywide Plan, these are BIO-4.14: Reduce Road Impacts in SCAs and BIO-5.f: Control Public Access. The RTMP contains policies and BMPs that address special status vegetation, which will include heritage trees. Policy SW-22 requires protection of high-value vegetation types and several BMPs to protect special-status plants, including avoidance measures (BMP Special-Status Plants – 2), revegetation measures (BMPs Special-Status Plants – 7 and – 12).

The MCOSD has incorporated the policies from the 2007 Marin Countywide Plan related to SCAs as governing policies into the RTMP. As listed in the 2007 Marin Countywide Plan, these are BIO-4.14: Reduce Road Impacts in SCAs and BIO-5.f: Control Public Access. The projects are consistent with these policies because the trail enters the SCA once to cross two forks of the stream. These are pre-existing crossings and the only work in the SCA is to replace existing culverts. Additionally, the project will improve stream habitat by installing new and better engineered culverts and reducing trail erosion that could degrade the quality of the stream water.

Conclusion

As described above, the proposed project avoids conflicts with County and MCOSD policies and ordinances. Although the RTMP EIR identified the potential for projects implemented under the plan to affect these resources, it identified policies and BMPs to avoid these potential impacts. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from conflicts with local ordinances and policies, provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Background

Habitat conservation plans (HCPs) are planning documents required as part of an application for an incidental take permit. They describe the anticipated effects of the proposed taking; how those impacts would be minimized, or mitigated; and how the HCP is to be funded. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. Conserving species before they are in danger of extinction or are likely to become so can also provide early benefits and prevent the need for listing. An HCP can apply to individual project affect a limited number of species or can be regional plans to address endangered species impacts in the area from otherwise legal development.

A Natural Community Conservation Planning program (NCCP) takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Existing Resource

There are no adopted HCP, NCCP, or NCCPs in Marin County.

Project Impacts

There are no adopted HCP, NCCP, or NCCPs in Marin County and therefore the projects would not have any impacts on any of these plans.

Conclusion

As described in the RTMP EIR, there are no adopted HCP, NCCP, or NCCPs in Marin County. This conclusion is still valid, since there have not been any new adopted conservation plans since the approval of the RTMP. Therefore, the projects would not have any impacts on any of these plans.

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F. CULTURAL RESOURCES

Environmental Issue Area	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Section 7.2.4 Page 7-12	No	No	No	Yes
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Section 7.2.4 Page 7-12	No	No	No	Yes
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Section 7.2.4 Page 7-18	No	No	No	Yes
d. Disturb any human remains, including those interred outside the formal cemeteries?	Section 7.2.4 Page 7-12	No	No	No	Yes

AB 52

AB 52 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 2, 2017, the MCOSD sent a letter to the Rancheria and on February 27, 2017, sent another letter to the Lone Band of Miwok Indians. The MCOSD did not receive a reply from Lone Band of Miwok Indians Tribe, and receive an email from the Rancheria acknowledging receipt of the County's notice, without any additional follow up comments. As of the publication of this analysis, the MCOSD did not receive any additional comments from the Rancheria. 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?***
- b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?***
- d) Would the project disturb any human remains, including those interred outside of formal cemeteries?***

Background

Archaeological evidence indicates that human occupation of California began at least 11,000 years ago. At the time of European settlement, the project sites were within territory controlled by the Coast Miwok (Origer, 2017). This group lived in rich environments that allowed for dense populations with complex social structures. They settled in large, permanent villages about which

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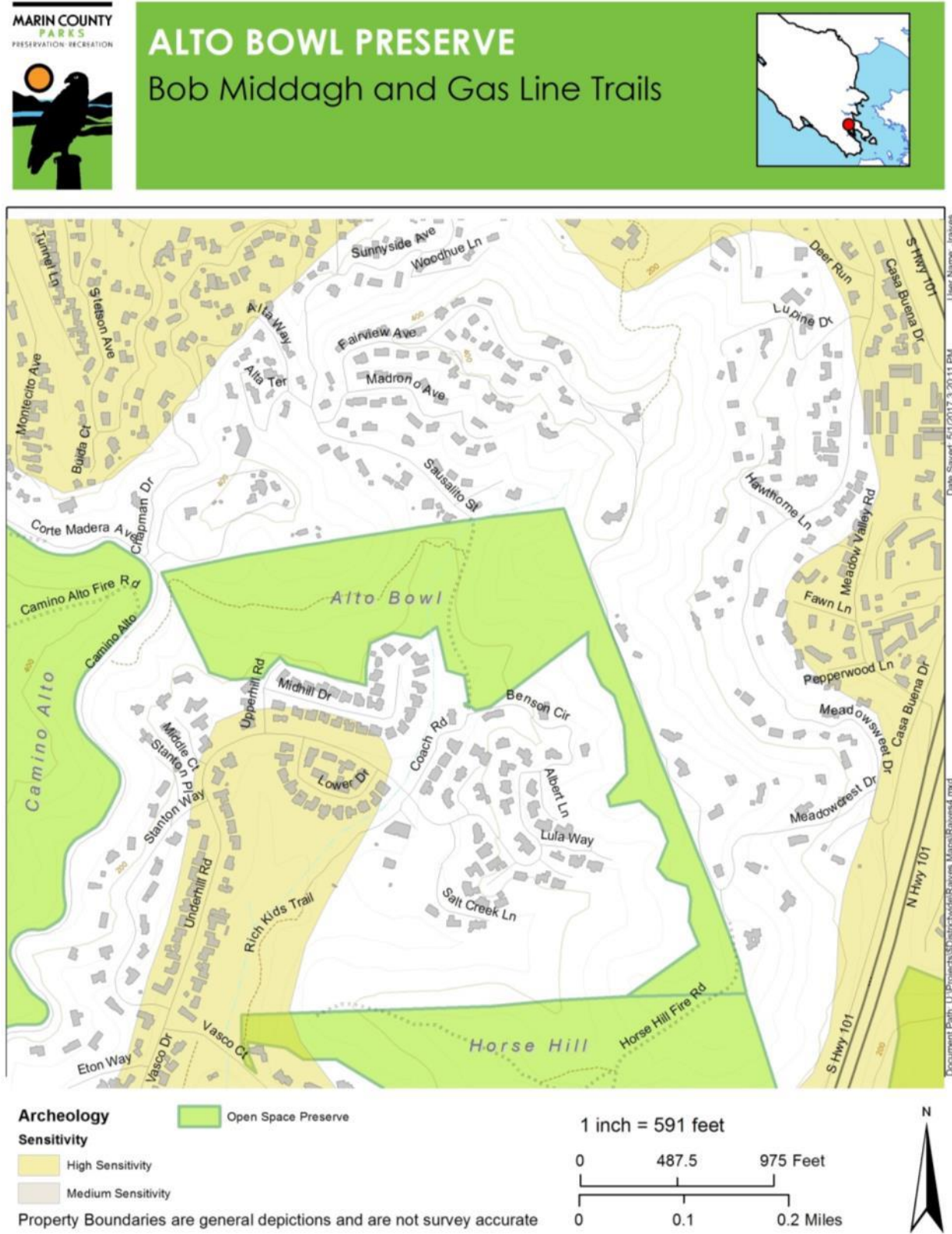
were distributed seasonal camps and task-specific sites. Primary village sites were occupied throughout the year and other sites were visited in order to procure particular resources that were especially abundant or available only during certain seasons. Sites often were situated near sources of fresh water and in ecotones where plant life and animal life were diverse and abundant. The Coast Miwok economy focused on marsh resources, and was supplemented by hunting and gathering.

With respect to historic resources, the project areas lie within the bounds of the Rancho Corte de Madera del Presidio, a 7,845-acre Mexican land grant given in 1834 by Governor José Figueroa to John Reed. The grant encompassed what are now southern Corte Madera, Mill Valley, Belvedere, Greenbrae, and the Tiburon Peninsula. It lay on the peninsula northwest of Raccoon Strait, reached from Point Tiburon to Larkspur Creek, and extended inland between Punta de Quentin and Sausalito Ranchos. A review of historical maps shows no evidence of buildings and structures within the study area (Origer, 2017).

Project Impacts

Consistent with the RTMP EIR, the MCOSD contracted with Tom Origer and Associates to evaluate the potential for cultural resources on the sites. In a letter dated April 4, 2017, the contractor concludes that the project sites have a “moderate potential for historical era resources and low probability of prehistoric archaeological site identification” (Origer, 2017). In addition, the County of Marin’s archaeological sensitivity data indicates that the area does not have a high or medium sensitivity for archaeological resources (Figure 20, CDA, 1968). Therefore, the projects are unlikely to have significant impacts on known cultural resources. However, any excavation project runs the risk uncovering previously unknown historic or archaeological resources. To address this issue, the RTMP includes BMP Cultural Resources-6 and -7 related to discovery of unknown cultural resources, including human remains, during construction, which requires halting the project until the area can be examined by a qualified archeologist and notifying the county coroner, in the case of human remains.

Figure 20: Archaeological Sensitivity



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Relationship to the RTMP

The RTMP EIR concludes that, with the incorporation of policies and BMPs related to cultural resources, projects implemented under the plan will not have the potential to have adverse impacts on cultural resources. The EIR states that:

The implementation of existing Marin County policies and ordinances, together with new systemwide policies and BMPs set forth in the RTMP, would in aggregate reduce adverse effects to sensitive cultural and historic resources. Implementation of the existing Marin County policies and ordinances ... would act to reduce potential adverse impacts to cultural or historic resources from all development activities in the county, including roads and trails. Systemwide policies and BMPs that would be implemented with adoption of the RTMP ... would result in further protection of cultural and historic resources from adverse effects caused by management actions associated with the RTMP. This would be accomplished by establishing procedures and performance standards for sensitive cultural and historic resources to be followed in the construction and maintenance of existing and new trails (MCOSD, 2014a, pp. 7-17 – 7-18).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to affect archaeological and historic resources. However, the archival search for this area concluded that the project areas have a moderate potential for historical era resources and low probability of prehistoric archaeological site identification (Origer, 2017). This report did not identify any new or more severe impacts beyond those considered in the RTMP EIR.

Applicable Policies and BMPs

The RTMP identifies several policies and BMPs that address potential impacts to cultural resources. The MCOSD incorporated the relevant policies and BMPs into the proposed projects (Table 6). Policies SW-27 and 28 requires the protection of known archaeological and historic resources. In addition, the MCOSD has incorporated several BMPs protect that require it to consider existing information on cultural resources to determine the likely these resources being present on the project sites, and protection resources that, in the unlikely event, they are unearthed during construction.

Table 6: Cultural Resources Policies and BMPs

Policies and BMPs	Description
Policy SW.27 Protect High-Value Cultural and Historic Resources by Rerouting or Confining Visitor Access	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.
Policy SW.28 Remove or Realign Roads and Trails Away from High-Value Cultural and Historic Resources	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.
BMP 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

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Policies and BMPs	Description
	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.
BMP 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.
BMP 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.
BMP Cultural Resources-6 Construction Discovery Protocol	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.
BMP Cultural Resources-7 Human Remains	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.

Conclusion

As described above, the proposed project would have less than significant impacts on archaeological and historic resources. Although the RTMP EIR identified the potential for projects implemented under the plan to affect these resources, it identified policies and BMPs to avoid these potential impacts. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from impacts to cultural resources, provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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

Background

Paleontological resources are the mineralized (fossilized) remains of prehistoric plants and animals and the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. These resources are located within sedimentary rocks or alluvium. Formations that contain vertebrate fossils are more sensitive because vertebrate fossils tend to be rare and fragmentary. Formations containing microfossils, plant casts, and invertebrate fossils are more common. A significant fossil deposit is a rock unit or formation that contains significant nonrenewable paleontological resources. This is defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate), which provide datable material and climatic information. This definition excludes invertebrate or botanical fossils except when present within a given vertebrate assemblage. However, invertebrate and botanical fossils may be significant as environmental indicators associated with vertebrate fossils.

Existing Resource

A records search showed that no recorded fossil sites are located within Marin County, although there are multiple records of invertebrate and plant fossils assigned to the Holocene or recent epoch. The Franciscan Complex, widespread in coastal California, has produced only small collections of significant fossils, none of which occurred in Marin County (MCOSD, 2014a).

Project Impacts

As discussed above, the Franciscan Complex, widespread in coastal California, has produced only small collections of significant fossils, none of which occurred in Marin County (MCOSD, 2014a). The MCOSD has already protected the unique geological resources within its preserves as permanent open space and avoids these features in its trail designs and plans. Thus, the potential impacts to unique paleontological resources or geologic features are less than significant, and do not require additional mitigation measures beyond those identified in the RTMP and its program EIR.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

As described in the RTMP EIR, it is unlikely the project sites have any fossils. Therefore, the projects would not have any impacts on this resource area.

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G. GEOLOGY, SOILS, AND SEISMICITY

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
<p>a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>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.</p> <p>ii. Strong seismic ground shaking?</p> <p>iii. Seismic-related ground failure, including liquefaction?</p> <p>iv. Landslides?</p>	<p>Section 8.2.4 Page 8-14</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes</p>
<p>b. Result in substantial soil erosion or the loss of topsoil?</p>	<p>Section 8.2.4 Page 8-26</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes</p>
<p>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?</p>	<p>Section 8.2.4 Page 8-17</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes</p>
<p>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?</p>	<p>Section 8.2.4 Page 8-22</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes</p>
<p>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?</p>	<p>Section 8.2.3 Page 8-14</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>NA</p>

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Background

The MCOSD preserves are within the central portion of the Coast Range Physiographic Province of California, composed of a series of northwest-southeast aligned coastal mountain chains dominated by a similar trending San Andreas Fault Zone (MCOSD, 2014a). Marin County has several faults delineated by the California Division of Mines and Geology, with the San Andreas Fault being the only fault identified by the Alquist-Priolo Earthquake Fault Zoning Act. Additionally, an active portion of the Hayward fault lies near the county. There is a 62 percent likelihood of fault rupture with a magnitude of 6.7 or greater to occur on one of the San Francisco Bay Area active faults, including the San Andreas or the Hayward faults, before the year 2032 (County of Marin, 2007). It is also possible, but with a low probability, that earthquakes may occur on inactive or previously unidentified faults.

Ground shaking is one of the key geologic hazards associated with seismic activity, with some areas more susceptible to strong shaking and potential damage due to their proximity to the fault zone or their underlying soil composition. Soils most susceptible to seismic shaking amplification tend to be younger alluvial deposits, bay mud, and artificial fill found in the lower lying areas around open water including Bolinas, San Pablo, and Richardson Bays.

Existing Resource

The main geologic hazards for the MCOSD's open space areas and trail infrastructure are landslides and other related slope stability hazards under strong seismic shaking, or more commonly, during intense rainfall events that quickly saturate the soil. Landslides are the downward movement of materials such as rock, soil, or fill. Debris flows are a rapid downslope movement of thick slurry composed of loose soil, rock, and organic material entrained with air and water; a debris avalanche is a more rapid or extreme debris flow.

Project Impacts

No portion of the Alto Bowl Open Space Preserve is within an Alquist-Priolo Earthquake Fault Zone (Fault Zone), and neither the United States Geological Survey (USGS) nor the California Geological Survey (CGS) has mapped active faults on the project sites (CGS, 2008). The nearest known active earthquake faults are the San Andreas Fault, located approximately 8.6 miles to the west, and the Hayward Fault, approximately 7.9 miles east (ABAG, 2015a). There is not a significant risk to trail users from earthquakes, because the projects do not include any occupied structures and the density of people using trails is relatively low in comparison to urban and suburban areas of Marin County.

Likewise, the risk of liquefaction is relatively low for the project site. The Association of Bay Area Governments (ABAG) has identified the liquefaction hazard at the project sites as "very low" based on CGS data (ABAG, 2015b; Knudson et al., 2000; and CGS, 2015). This hazard would not result in significant harm to recreation users, since the projects do not include any habitable structures and the density of people using trails is relatively low in comparison to urban and suburban areas of Marin County.

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While the project site may be vulnerable to landslides, mudslides, and slope instability, development of the proposed trail would not result in a risk to property or public safety, because of lack of habitable structures and the low density of public use. Most of the project sites are located in an area that is identified as “Mostly Landslides” with approximately a quarter of the site, mostly around the area affected by the Gas Line Trail re-alignment, classified as “few landslides” (ABAG, 2015c). The project sites contains moderate to steep terrain with slopes draining to the south and west of the preserve. As with other geologic hazards at the site, landslides would not cause significant harm to trail users because of the project given the low intensity of physical structures and the ongoing recreation use. The project would not expose recreational users to new hazards.

Relationship to the RTMP

The RTMP EIR concludes that projects implemented under the RTMP will avoid significant impacts from geologic hazards. Specifically, the EIR states:

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 [of the RTMP] would avoid or reduce the effect of seismic hazards. Thus, this impact would be less than significant and no mitigation would be necessary (MCOSD, 2014a, p. 8-17).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to expose people to earthquake and landslide hazards. However, due to the relatively low number of users and the lack of structures associated with trail projects, the EIR concluded that this impact would be less than significant. There is nothing in the administrative record for the proposed projects that would indicate new or more severe impacts beyond those considered in the RTMP EIR.

Applicable Policies and BMPs

Since the propose project sites do not have propensity for geologic instabilities, the MCOSD is not incorporating BMP Geologic Hazards 1, which requires the MCOSD to hire geotechnical expert to evaluate projects in high risk areas, into the proposed projects. The MCOSD would conduct routine inspections and maintenance projects as needed and as required by BMP General-10. This requirement would allow the MCOSD to identify and repair any damage due to these geologic hazards. Therefore, the proposed projects are consistent with the RTMP EIR’s analysis and do not require additional mitigation measures.

Table 7: Geology, Soils, and Seismicity Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
BMP Geologic Hazards-1 Assessment and Requirements in Areas of Potential Geologic	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

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<i>Policies and BMPs</i>	<i>General Description</i>
Hazard	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.
BMP General-10 Requires regular inspection and maintenance of roads and trails	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.

Conclusion

As described above, the potential for the projects to expose people or structures to substantial adverse effects from geologic hazards is less than significant. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from impacts to geologic hazards, provided that the projects implement the BMP General-10. The MCOSD has incorporated the relevant measure into the projects, and therefore, they would not require additional mitigation measures beyond the BMP identified in the RTMP.

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

Background

Erosion is a natural process whereby soil and highly weathered rock materials are worn away transported, most commonly by wind or water. Soil erosion can become problematic when human intervention causes rapid soil loss and the development of erosional features (such as incised channels, rills, and gullies) that undermine roads, buildings, or utilities. Vegetation clearing and earth-moving reduces soil structure and cohesion, resulting in abnormally high rates of erosion, referred to as accelerated erosion. Natural rates of erosion can vary depending on slope, soil type, and vegetative cover (regional erosion rates are also dependent on tectonics and changes in relative sea level). Soils containing high amounts of silt are typically more easily eroded, while coarse-grained (sand and gravel) soils are generally less susceptible to erosion.

Existing Resource

Soils within the MCOSD preserves are predominantly loam to clay loam with severe to very severe erosion hazard, particularly in regards to the MCOSD's earthen trails and roads. According to field observations recorded during mapping and assessing the MCOSD's trail and road network, soils in the vicinity of roads and trails were moderately drained with high erosion potential, which was most evident in areas where runoff was concentrated. The breakdown of soil under heavy trail use often leads to accelerated erosion and trail rutting (MCOSD 2011). One of the primary purposes of the RTMP was to set up a process to address heavily erosive trails and to reduce sedimentation caused by MCOSD's roads and trails.

Project Impacts

One of the primary purposes of the projects is to fix trails that are overly steep and erosive with a variety of erosion control features, such as outsloping, rolling dips, water bars, and slope control (maintaining a seven percent running slope to the degree possible). Additionally, the projects include provisions to treat all disturbed areas with erosion control measures. The MCOSD would use silt fences, erosion control blankets, and mulch to prevent significant erosion during and after construction. Finally, the RTMP's BMP Geologic Hazards-3 and BMP Water Quality-3 require the MCOSD to implement measures to prevent significant erosion during construction and operation of trail projects.

Relationship to RTMP

The RTMP EIR concludes that projects implemented under the plan are not likely to have significant impacts on soil erosion. Specifically, the RTMP concludes that this impact will not be significant.

Construction design standards for trails and roads set forth in the RTMP that properly manage surface water flow are intended to reduce ongoing erosion after 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 (MCOSD, 2014a, p 8-29).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to result in substantial soil erosion. However, due to design standards and BMPs identified in the RTMP, the EIR concluded that this impact would be less than significant. There is nothing in the administrative record for the proposed projects that would indicate new or more severe impacts beyond those considered in the RTMP EIR.

Applicable Policies and BMPs

The policies incorporated into the RTMP require that the MCOSD minimize erosion, use best management practices, and reduce the overall impacts of roads and trails. The RTMP also identifies several design standards that address erosion issues, including the following:

- Trail cross sections to ensure proper drainage with a preference for outsloped trails;

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- Standards for dips and water bars that rely in the grade of the trail; and
- Standards for maintaining slope stability.

In addition, the RTMP includes BMPs that address erosion control and construction of trails in areas with erodible soils. Finally, RTMP BMP General-10 requires the MCOSD to conduct routine inspections and maintenance trails as needed. This requirement would allow the MCOSD to identify and repair any erosion concerns. Therefore, the proposed projects are consistent with the RTMP EIR’s analysis and do not require additional mitigation measures.

Table 8: Soil Erosion Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
CWP Policy TRL-2.b: Design, Build, and Manage Trails in a Sustainable Manner.	Incorporate design measures that protect vegetation, protect habitats, and minimize erosion.
PRI Policy T2a	The MCOSD will use best management practices in the design, construction, and maintenance of trails.
RTMP 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.
BMP Geologic Hazards-3 Construction in Areas of Erodible and Expansive Soils	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.
General-10 Requires regular inspection and maintenance of roads and trails	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.
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. • 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.

Conclusion

As described above, the proposed project would have a less than significant impacts on soil erosion. Although the RTMP EIR identified the potential for projects implemented under the plan to affect this resource, it identified policies, design standards, and BMPs to avoid these potential impacts. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from impacts to soil erosion, provided that the projects implement the relevant RTMP policies and BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

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?

Background

Slope failures, commonly referred to as landslides, include many phenomena that involve the downslope displacement and movement of material, either triggered by static (i.e., gravity) or dynamic (i.e., earthquake) forces. Slope stability can depend on several complex variables, including the geology, structure, and the amount of groundwater present, as well as external processes such as climate, topography, slope geometry, and human activity. Liquefaction is the rapid loss of shear strength experienced in saturated, predominantly loose granular soils below the groundwater level during strong earthquake groundshaking and occurs due to an increase in pore water pressure. Earthquake-induced settlement of soils results when relatively unconsolidated granular materials experience vibration associated with seismic events. The vibration causes a decrease in soil volume as the soil grains tend to rearrange into a more dense state. This decrease in volume and consolidation of soil can result in the settlement of overlying structural improvements. Expansive soils expand and contract in response to changes in soil moisture, most notably when near-surface soils change from saturated to dry and back again. Generally, the expansiveness relates to the clay content in the soil. These soils often expand or swell in the winter and shrink in the dry summer months. Many of the earth flows that occur in the hillslopes are due to a thick accumulation of expansive soils, particularly in areas underlain by Franciscan mélange. Many of the soils in Marin County have moderate to high expansion potential.

Existing Resource

According to the Natural Resource Conservation Service, Saurin-Bonnydoon complex is the dominate soils within the trail network. This soil association is composed of 50 percent Saurin and similar soils, characterized as clay loam, 40 percent Bonnydoon, characterized as a gravelly loam, and minor percentages of Tocaloma, Los Osos, and other unnamed soils. It is weathered and well-drained sandstone and shale (NRCS, 2017). The underlying bedrock is Franciscan Complex mélange (TrailPeople, 2016b).

As described in the section that evaluates criterion a) for geologic resources above, much of the MCOSD's land, including the Alto Bowl Preserve, is at risk for landslides. Several shallow landslides have occurred on the MCOSD parklands in recent years from high intensity and long-duration storm events. The slides are more often found in areas where steep slopes are over-steepened due to bank erosion, or along ravines or swales where surface- and groundwater

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concentrates. Some of the noted landslides were in areas where fill was placed on already steep slopes, or where roadways concentrated storm runoff.

Project Impacts

Roads and trails could contribute to destabilization of slopes or alteration of water flow patterns that could exacerbate landslides and expansive soils hazards. Additionally, roads or trails could be damaged or destroyed by these hazards. These slope and soil stability issues are likely the main geologic hazards for the MCOSD preserves and trail infrastructure. Most of the project sites are located in an area that is identified as “Mostly Landslides” with approximately a quarter of the site, mostly around the area affected by the Gas Line Trail re-alignment, classified as “few landslides” (ABAG, 2015c). Expansive soils are a hazard for the development of structures, such as houses with concrete foundations. This hazard is not likely to damage a dirt trail.

As with other geologic hazards at the site, landslides and expansive soils would not result in significant harm to trail users as a result of the project given the low intensity of physical structures and the relatively low-density ongoing recreation use. Even if these hazards damage the trails, the MCOSD’s monitoring and maintenance program, as described RTMP BMP General-10, would allow the MCOSD to identify and fix any issues resulting from these hazards. Finally, since the projects are to improve and realign portions of existing trails, it would not increase the exposure of recreational users to these hazards.

Relationship to the RTMP

The RTMP EIR concludes that this impact would not be significant because the plan contains policies and BMPs that address this issue. Specifically, the RTMP states that:

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 (MCOSD, 2014a, p. 8-26).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies potential for individual trail projects to result in impacts from slope stability and expansive soils hazards. However, due to design standards and BMPs identified in the RTMP, the EIR concluded that this impact would be less than significant. There is nothing in the administrative record for the proposed projects that would indicate new or more severe impacts beyond those considered in the RTMP EIR.

Applicable Policies and BMPs

BMP Geologic Hazards-2, which requires that roadway and trail construction take into account potential slope stability hazards. Because it is unlikely for expansive soils to trail features, the RTMP does not identify a BMP to address this hazard. The RTMP BMP General-10 requires routine inspection and maintenance of the trail. The MCOSD has incorporated these BMPs into the proposed projects.

Table 9: Landslides and Expansive Soils Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
BMP Geologic Hazards-2	In areas of identified slide and debris flow hazards, locate and design new trails, drainage

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<i>Policies and BMPs</i>	<i>General Description</i>
Construction in Areas of Slides and Debris Flows	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.
General-10 Requires regular inspection and maintenance of roads and trails	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.

Conclusion

As described above, the proposed project would have less than significant impacts on landslide and expansive soil hazards. Although the RTMP EIR identified the potential for projects implemented under the plan to affect this resource, it identified policies, design standards, and BMPs to avoid these potential impacts. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from impacts to these hazards, provided that the projects implement the relevant RTMP BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Project Impacts

The project would not generate any wastewater and would not include the installation or use of any septic tanks or alternative wastewater disposal systems. The project would not impact this issue area.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

The projects would not have any impacts on this resource area.

H. GREENHOUSE GAS EMISSIONS

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Section 9.2.4 Page 9-15	No	No	No	NA
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Section 9.2.3 Page 9-14	No	No	No	NA

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

Existing Resources

There is general scientific consensus is that global climate change is occurring and caused by increased emissions of greenhouse gases. 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).

In 2012, estimated GHG emissions generated by community activities in Marin County's unincorporated areas were approximately 477,000 MTCO₂e (Metric tons of carbon dioxide equivalent), or per capita emissions of approximately 7.1 MTCO₂e for the 67,000 residents in the unincorporated areas. This amount is equivalent to the annual GHG emissions generated by approximately 100,000 passenger vehicles. Of these total emissions, On-Road transportation and building energy use are the largest sources of emissions (35 percent each). The third largest source is agriculture (23 percent), followed by off-road equipment (4 percent), solid waste treatment (2 percent), wastewater treatment (1 percent), and water conveyance (0.2 percent) (County of Marin, 2013).

For municipal activities from County government operations, estimated GHG emissions in 2012 were approximately 15,000 MTCO₂e, or emissions of 7.0 MTCO₂e per County employee. This amount is equivalent to the annual GHG emissions generated by approximately 3,000 passenger vehicles. Of these total emissions, employee commute is the largest source of emissions (43 percent). Building energy use is the second largest source of emissions (36 percent). The third largest source is the vehicle fleet (18 percent), followed by wastewater treatment (1.4 percent), streetlights and traffic signals (0.6 percent), refrigerants (0.4 percent), stationary sources (0.4 percent), solid waste generation (0.3 percent), and water conveyance (0.2 percent) (County of Marin, 2013).

Project Impacts

The projects would generate greenhouse gas emissions during construction and operation. Construction emissions would largely be generated onsite due to the use of off-road equipment associated with construction of the trail improvements. The MCOSD estimates that construction of the projects would take approximately eight weeks total and would require a maximum of four MCOSD employees working at least four days a week from 8 am to 6 pm. Construction equipment would include an excavator, dozer, two power carriers, chainsaws, hedge trimmers, and a dump truck. Greenhouse gas emissions would be limited as a result of the small size of the construction equipment used for trail projects and the short eight week duration. Minor emissions would be associated with equipment deliveries and employees driving to and from the project site.

Operational emissions would result from ongoing maintenance of the site, ongoing patrol by MCOSD staff, and minor increases in use due to regional population growth. The proposed modifications to the Bob Middagh Trail include a change in designated uses to allow bicycles, which could cause an increase in trail use. However, these users are likely to ride their bicycles to the preserve. The project would also provide an off-road bicycle connection through the City of Mill Valley, which could facilitate use of bicycles as a form of alternative transportation. Increased bicycle use could reduce the number of car trips and their associated greenhouse gas emissions. The MCOSD also expects most of the use to be from the local community. The Marin County Parks Visitor Study Report found that 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 (Parks, 2016c). Additionally, since Alto Bowl is a small preserve that does not have any significant vistas or other factors that would be a regional draw. Greenhouse gas emissions from operation of the project would be similar to existing levels. No additional staffing is required to patrol or maintain the trails and maintenance levels would be similar to existing conditions.

Overall, the improvements would not significantly increase greenhouse gas emissions as a result of use of the trail. As described above, most of the use this area would be from local residents and trailhead parking is limited to existing on-street areas that have limited capacity. The availability of parking is a significant factor that would limit traffic to the area. Therefore, the projects would have a less than significant impact regarding greenhouse gas emissions.

Relationship to the RTMP

The RTMP EIR states that greenhouse gas emissions resulting from implementation of the RTMP would include emissions from construction equipment and visitors and employees driving to the trailheads after completion of the trail improvements. The RTMP EIR concludes that there would be no significant measurable increase in greenhouse gas emissions with the implementation of the RTMP. The RTMP states:

The RTMP includes some policies that potentially could lead to an increase in short-term construction-related GHG emissions, but an overall reduction in long-term maintenance GHG emissions. The net environmental benefit policy would require offsetting the construction of any new trail with the maintenance, improvement, or decommissioning of varying amounts of existing roads and trails. Construction of the new road or trail in addition to maintenance, improvement, or decommissioning of the old trail could result in increased air pollutant emissions in the short term. However, in the long-term, maintenance activities would be reduced as the MCOSD replaces existing roads and trails with better constructed, lower maintenance facilities. Because the ultimate selection of improvement activities is unknown and would vary over the course of implementing the RTMP, the increase of GHG

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emissions from construction activities or reduction from lowered maintenance requirements cannot be quantified for any given time or particular location.

While the RTMP project does not envision the planting of additional forest resources or additional acreage, it provides a comprehensive management plan for 34 open space preserves owned and managed by the MCOSD ranging in size from 8 acres to more than 1,600 acres, which together total nearly 16,000 acres scattered throughout central and eastern Marin County. These preserves represent a potential carbon “sink” in their ability to sequester carbon. While the implementation of the RTMP would require some trimming of trees for construction and maintenance of roads and trails, tree removal would be generally avoided if possible. By maintaining these preserves, the RTMP project would foster some absorption of greenhouse gases.

Because the RTMP project would not result in a net increase in either construction or operation related GHG emissions, implementation of the RTMP would not generate GHG emissions that would have a significant impact on the environment. A less-than-significant impact would result, and no mitigation would be necessary (MCOSD, 2014a, pp. 9-17 – 9-18).

With respect to the operation of new or modified trails, the EIR concludes that the implementation of the RTMP would not result in significant increase in greenhouse gas emissions from vehicles used to transport users to the trailheads. The EIR based this conclusion on the fact that the RTMP manages the existing system of roads and trails and does not increase trail use. Any increase in trail use would be from population growth or other similar effects not associated with the proposed project.

Applicable Policies and BMPs

The RTMP and its EIR do not contain any policies or BMPs addressing greenhouse gas emissions.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would produce minor greenhouse gas emissions during construction. Emissions associated with ongoing maintenance and patrol of the trails would be similar to existing conditions. As a result of the new bicycle designation, the project could reduce overall greenhouse gas emissions as a result of supporting alternative transportation. Therefore, the proposed project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The projects are consistent with the circumstances described in the RTMP EIR and there is no new substantially important information with respect to greenhouse gases that would require new analysis or verification.

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

Existing Resources

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Assembly Bill; AB 32). AB 32 focuses on reducing GHG emissions in California and requires that they be reduced to 1990 levels by the year 2020.

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Project Impacts

The proposed project would not conflict with certain GHG reduction goals set forth in AB 32, including the 39 Recommended Actions identified by the California Air Resources Board (CARB) in its Climate Change Scoping Plan. The project would also not conflict with goals and policies contained in the Marin CWP and Climate Action Plan.

Relationship to the RTMP

The RTMP EIR concludes that the plan would have “No Impact” on potential conflicts with an applicable plan, policy, or regulation adopted for reducing the emissions of greenhouse gases. Specifically, the RTMP EIR states that:

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 15 to 20 percent below 1990 levels by the year 2020 for internal government and 15 percent countywide. The RTMP project would not result in an increase in construction or operation-related GHG emissions. Because the RTMP project 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 (MCOSD, 2014a, pp. 9-12 – 9-13).

Applicable Policies and BMPs

Neither the RTMP nor its EIR identified any BMPs or policies that address greenhouse gas emissions.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not conflict with AB 32, the Marin CWP, or Marin Climate Action Plan. The projects would further the goals of the County’s Climate Action Plan by increasing opportunities for bicycle use. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, which concludes that the plan would not conflict with the County’s Climate Action Plan. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new substantially important information with respect to conflicts with the AB 32 or the Marin County Climate Action Plan.

I. HAZARDS

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Create a significant hazard to the public or the environment through	Section 10.2.1 Page 10-16	No	No	No	Yes

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
the routine transport, use, or disposal of hazardous materials?					
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?	Section 10.2.1 Page 10-16	No	No	No	Yes
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Section 10.2.1 Page 10-22	No	No	No	Yes
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?	Section 10.2.3 Page 10-16	No	No	No	NA
e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	Section 10.2.3 Page 10-16	No	No	No	NA
f. For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working on the Project area?	Section 10.2.3 Page 10-16	No	No	No	NA
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Section 10.2.3 Page 10-23	No	No	No	Yes
h. Expose people or structures to a significant	Section 10.2.3	No	No	No	Yes

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Page 10-24				

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

Background

Hazardous substances are substances that have been designated in government codes and regulations or that exhibit certain characteristics such as being toxic, corrosive, flammable, reactive, or explosive. A non-hazardous substance can become a hazardous waste if during its normal use it comes to meet the definition of a hazardous material or hazardous substance.

Existing Resources

Hazardous materials are currently used at the project site during routine maintenance from the use of motorized equipment for weed and vegetation control, trail maintenance, and routine patrols. The vehicles that the MCOSD use at the project site contain hazardous materials, including gasoline, lubricants, and other solutions. No hazardous materials are stored at the project site.

Project Impacts

During construction, the MCOSD would use small quantities of fuel, lubricants, and other similar construction materials that can be hazardous. There may be a potential for releases to occur during construction that could affect construction workers, recreational users, and the environment. During operation of the project, hazardous materials used at the project would not be frequent, though maintenance activities involving heavy equipment may have the potential to result in releases of the same types of hazardous materials used during construction. However, there are laws and regulations that govern the transport, use, storage, handling and disposal of hazardous materials to reduce the potential hazards associated with these activities. California Occupational Safety and Health Administration (CalOSHA) is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials. Transportation of hazardous materials is regulated by the federal Department of Transportation (DOT) and the California DOT (Caltrans). Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. Therefore, the transport, use, storage, handling, and disposal of hazardous materials for the project would be adequately controlled through existing regulatory requirements and the

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potential impact during construction would be less than significant. Implementation of BMPs General-6 and Water-4 would ensure that upset from accidents are reduced to a less than significant level.

Relationship to the RTMP

The RTMP EIR concludes that projects implemented under the plan will have a less than significant impact on this issue area. Specifically, the RTMP EIR states that:

... [T]he 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 (MCOSD, 2014a, p. 10-22).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. In this case, the RTMP EIR identifies a potential for individual trail projects to expose people to hazardous materials from construction and maintenance of the trails. The RTMP EIR concludes that, because of the small amount of hazardous materials used for construction and maintenance (e.g., fuels, oils, lubricants, and other similar material) and the RTMP BMPs, projects implemented under the plan will not result in significant impacts from hazardous materials. Therefore, the proposed projects would not result in new or more severe impacts beyond those considered in the RTMP EIR.

Applicable Policies and BMPs

The projects would comply with BMP General-6 and BMP Water Quality-4, which would reduce potential impacts from routine transportation, use, or disposal of hazardous materials to a less-than-significant level. These BMPs include (1) worker training and restrictions on refueling, equipment maintenance, and other activities using hazardous materials, and (2) requirements for contractors to carry emergency spill equipment. Therefore, the projects would not create a significant hazard to the public or the environment, and would not require additional mitigation measures beyond those identified in the RTMP and its EIR.

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Table 10: Hazardous Materials Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
General-6	Restrict fueling, vehicle maintenance, and other activities involving hazardous materials during construction activities.
Water Quality-4	Train staff and restrict fueling, vehicle maintenance, and other activities involving hazardous materials by contractors.

Conclusion

As described above, the proposed project would not expose people or the environment to impacts associated with the use of hazardous materials. Although the RTMP EIR concludes that projects implemented under the plan would require the use of hazardous materials, it identified BMPs to avoid these potential impacts. There are no project modifications, changed circumstances, or new information that would result in new significant or substantially more severe impacts resulting from the use of hazardous materials, provided that the projects implement the relevant RTMP BMPs. The MCOSD has incorporated the relevant measures into the projects, and therefore, they would not require additional mitigation measures beyond the policies and BMPs identified in the RTMP and its EIR.

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?

Project Impacts

The closest school to the proposed trail improvements is the Maguire Edna School, which is approximately ½ mile from project sites. Other schools in the area are much further away, at least a mile away. Although unlikely, the project could result in the release of hazardous materials from routine transportation, use, or disposal of hazardous materials such as oils, lubricants and other fluids required for construction equipment. Releases would be limited to fluids used for construction equipment; which would be onsite in small quantities. Since the proposed projects are located more than ¼ mile from a school, there is a very low potential for a spill to affect the school. Implementation of BMPs would control runoff from leaving the project sites and limit the potential spread of contaminate. Furthermore, the erosion control BMPs would reduce the risk of release or exposure of hazardous materials during construction would be low. Therefore, the potential for a hazardous materials release during construction that would result in increased exposure to hazardous materials at the nearby schools is very low and this impact is less than significant.

Relationship to the RTMP

The RTMP EIR states that the implementation of the plan would not have a significant impact on the release of hazardous materials within a ¼ mile of a school. The RTMP EIR states that:

Although the risk of the accidental release of hazardous materials into the environment near a school 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 of releases near schools. This would be a less-than-significant impact and no mitigation would be required (MCOSD, 2014a, p. 10-23).

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Applicable Policies and BMPs

The projects would comply with BMP General-6 and BMP Water Quality-4, which would reduce potential impacts from routine transportation, use, or disposal of hazardous materials to a less-than-significant level. These BMPs include (1) worker training and restrictions on refueling, equipment maintenance, and other activities using hazardous materials, and (2) requirements for contractors to carry emergency spill equipment. Therefore, the projects would not create a significant hazard to the public or the environment, and would not require additional mitigation measures beyond those identified in the RTMP and its EIR.

Table 10 above identifies the BMPs from the RTMP that address release of hazardous materials.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects are not located with a ¼ mile of a school (the closest school is over 0.5 mile away from the project sites). With the implementation of the RTMP's BMPs and compliance with applicable regulations, the projects would avoid impacts from the release of hazardous materials. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to hazardous material management that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the state, local agencies and developers to provide information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to update Cortese List annually. A search of the current Cortese Lists identifies two sites in Corte Madera and none in Mill Valley (DTSC, 2017). The two Cortese sites in Corte Madera are located over a mile from the project location and would not be affected by the project.

Project Impacts

MCOSD confirmed that there are no hazardous materials sites within or near the Alto Bowl Open Space Preserve (SWRCB, 2017; DTSC, 2017). Therefore, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan would have “no impact” on this issue area because there are no hazardous materials sites located at within an open space preserve. The RTMP EIR concludes that:

As described above under Environmental Setting, no identified active Cortese List (Government Code Section 65962.5) site is located within an MCOSD open space preserve. Therefore, there would be no impact (MCOSD, 2014a, p. 10-16).

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Applicable Policies and BMPs

Neither the RTMP nor its EIR identify any BMPs or policies that address hazardous material sites.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not be located on a Cortese site. The Alto Bowl Preserve is not located near any hazardous material sites and the projects would not expose people to this hazard. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to Cortese sites that is of substantial importance requiring new analysis or verification.

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?

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?

Existing Resources

The nearest airports are the private San Rafael Airport and the public Gness Field Airport in Novato, which are approximately seven and sixteen miles, respectively, north of the project site. No aviation hazards would result from modifications to the existing trails in Alto Bowl Preserve.

Project Impacts

There are no aviation hazards associated with the proposed project and no airfields in the project area. Therefore, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the RTMP would have “no impact” on this resource area. The RTMP EIR states that:

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 (MCOSD, 2014a, 10-16).

Applicable Policies and BMPs

The RTMP and its EIR do not contain any mitigation measures or BMPs that address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not increase the safety risk of people living or working near a private or public airport. The Alto Bowl Preserve is not located

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near any airport and the projects would not expose people to this hazard. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to private or public airports that is of substantial importance requiring new analysis or verification.

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

Existing Resources

The project sites are not currently used for emergency access for the City of Mill Valley or Town of Corte Madera.

Project Impacts

The projects would not change or disrupt vehicular or pedestrian traffic in the site vicinity in a way that would have the potential to interfere with emergency response or evacuation. This impact would be less than significant.

Relationship to the RTMP

The RTMP EIR addresses this topic by referring to its analysis of traffic’s impact on emergency vehicles. In that section, the RTMP EIR concludes that:

Implementation of Systemwide Policies SW.19, SW.20, and SW.21 would ensure continued access to open space preserves for fire fighters and other emergency personnel. Therefore, implementation of the RTMP would not lead to inadequate emergency access. This impact would be less than significant, and no mitigation would be required (MCOSD, 2014a, p. 13-21).

Applicable Policies and BMPs

Table 11: Emergency Response Plan Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
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.
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.

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<i>Policies and BMPs</i>	<i>General Description</i>
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.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not interfere with the implementation of an adopted emergency response plan. The proposed modifications to the existing trails would not affect an emergency response plan and the projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there is no new information with respect to emergency response and evacuation planning that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

In accordance with California Public Resource Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, the California Department of Forestry and Fire Protection (CALFIRE) has mapped areas of significant fire hazards because of fuels, terrain, weather, and other relevant factors. Cal Fire has classified the fire-hazard severity zones as “Medium,” “High,” or “Very High” based on fire risk. The project sites are located in an area mapped as having High Wildfire Hazard (CALFIRE, 2007).

Project Impacts

Although construction and maintenance equipment could generate sparks and could temporarily increase fire risk, the RTMP contains policies and BMPs to reduce this hazard. RTMP 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. As a result, the project would not expose people or structures to a significant risk and this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR thoroughly analyzes this issue and concludes that the impact on this resource area will be “less than significant.” Specifically, the EIR concludes that:

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

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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 (MCOSD, 2014a, p. 10-29).

According to the RTMP EIR, the implementation of the plan’s system-wide policies and BMPs will reduce potential impacts from wildfire hazards to a less-than-significant level. The proposed projects incorporate these policies and BMPs, and therefore, they are consistent with the conclusions contained in the RTMP EIR and would not require additional mitigation measures or BMPs.

Applicable Policies and BMPs

Table 12: Wildland Fires Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
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.
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.
Policy SW.21: Roads or Trails	Roads or trails subject to or encumbered by license, lease, or easement, for

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<i>Policies and BMPs</i>	<i>General Description</i>
Serving Nonrecreational Uses	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.
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.
BMP Construction Contracts-1	Equip all vehicles with a suitable fire extinguisher.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not significantly increase the risk of wildfires. These projects incorporate BMPs and policies to address this hazard and would comply with all applicable rules and regulations. Therefore, they would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, and therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to wildland that is of substantial importance requiring new analysis or verification.

J. HYDROLOGY AND WATER QUALITY

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
a. Violate any water quality standards or waste discharge requirements?	Section 11.2.4 Page 11-57	No	No	No	Yes
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 which would not support existing land uses or planned uses for which permits have been granted?	Section 11.2.4 Page 11-84	No	No	No	NA
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the	Section 11.2.4 Page 11-80	No	No	No	Yes

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?					
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?	Section 11.2.4 Page 11-82	No	No	No	Yes
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Section 11.2.4 Page 11-82	No	No	No	Yes
f. Otherwise substantially degrade water quality?	Section 11.2.4 Page 11-57	No	No	No	Yes
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?	Section 11.2.3 Page 11-57	No	No	No	NA
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Section 11.2.4 Page 11-85	No	No	No	Yes
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Section 11.2.4 Page 11-85	No	No	No	Yes
j. Inundation by seiche, tsunami, or mudflow?	Section 11.2.4 Page 11-85	No	No	No	NA

- a) *Would the project violate any water quality standards or waste discharge requirements?*
- f) *Would the project otherwise substantially degrade water quality?*

Existing Resources

The project sites are located within the Richardson Bay watershed, which has an area of 12,025 acres (Marin County Watershed Program, 2016). Stormwater from the project sites runs through sheet flow and ephemeral drainages that drain into Sutton Manor Creek, and ultimately to Richardson Bay.

Project Impacts

Construction along the new and existing trail alignments could be a source of sediment affecting water quality. During construction, water quality could be affected by erosion from grading and earthmoving operations, a release of fuels or other chemicals used during construction, or a release of materials generated during demolition and construction. Grading and earthmoving would expose soil during construction and could result in erosion, with excess sediments carried in stormwater runoff. Stormwater runoff from temporary on-site use and storage of vehicles, fuels, wastes, and building materials could also carry pollutants into Stafford Manor Creek, if these materials were improperly handled. The MCOSD has designed the projects in accordance with the RTMP requirements. The projects plans include frequent drain dips and other water-control features to minimize concentrated trail surface-water runoff. These BMPs, policies, and design standards would minimize potential water quality impacts from construction and operation of the proposed trails, and they would not require additional mitigation measures or BMPs beyond those identified in the RTMP and its EIR.

The proposed projects incorporate the policies, BMPs, and design guidelines from the RTMP that addresses potential water quality impacts. One of the primary objectives of the RTMP is to reduce trail erosion and sedimentation into nearby waterbodies. The long-term effect of implementation of the RTMP would be to improve water quality over existing conditions (MCOSD, 2014a).

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this resource area and will not require additional mitigation. Specifically, the EIR states that:

... with implementation of the RTMP, the MCOSD would take a proactive approach to comply with sensitive resource regulations and protect water quality. The policies and BMPs of the RTMP would standardize practices when planning, designing, and constructing any road and trail management action. Implementation of the RTMP policies for improving the road and trail system, moving facilities out of the more sensitive and erosion prone locations, standardizing sustainable road and trail designs, implementing temporary and permanent BMPs, and complying with existing NPDES and other water quality regulations would reduce or avoid potential impacts to water quality. At a programmatic level, this would be a less than significant impact, and no mitigation would be necessary [MCOSD, 2014a, p. 11-80].

The RTMP includes construction standards for road and trail dips and water bars, ditch relief culverts and outlets, and performance standards for slope stability. The RTMP also includes rigorous BMPs to reduce potential water quality impacts during construction and operation of roads and trails. Table 13 lists BMPs from the RTMP that the MCOSD has incorporated into the project.

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Bob Middagh and Gas Line Trails Improvement Project**

Applicable Policies and BMPs

Table 13: Water Quality Policies and BMPs

Policies and BMPs	General Description
<p>BMP General-3 Minimizing potential for erosion (including limiting work area footprint in sensitive resource areas)</p>	<p>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:</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. 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. <p>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.</p>
<p>BMP General-6 Preventing or reducing potential for pollution</p>	<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. <p>Absorbent materials should be on hand at all times to absorb any minor leaks and spills.</p>
<p>BMP General-7 Including standard procedures (including Storm Water Pollution Prevention Plans and erosion control provisions) in construction contracts</p>	<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

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Policies and BMPs	General Description
	<p>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).</p> <ul style="list-style-type: none"> » 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. <p>» 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).</p>
BMP General-10 Road and trail inspections	<p>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.</p>
BMP Water Quality-1 Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas	<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). <p>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>
BMP Water Quality-2 Temporary erosion and sediment control	<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 post-construction 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

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Policies and BMPs	General Description
	<p>sufficient vegetation coverage.</p> <ul style="list-style-type: none"> • 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 » coir (jute) netting » biodegradable erosion-control blankets » plastic sheeting (only as an interim protection during storm events when construction site is still active) • 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 cofferdam enclosed in plastic sheeting, water-filled dam (e.g., Aquadam), sheet piling, and turbidity curtains. <p>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).</p>
<p>BMP Water Quality-3 Erosion control measures</p>	<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>
<p>Water Quality-4 Preventing or Reducing the Potential for Pollution</p>	<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. <p>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.</p> <ul style="list-style-type: none"> • Require all contractors to possess, and all vehicles to carry, emergency spill containment materials. <p>Absorbent materials will be on hand at all times to absorb any minor leaks and spills.</p>
<p>BMP Water Quality-5 Road and trail inspections (to protect water quality or other resources)</p>	<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>
<p>BMP Water Quality-6 Grading windows</p>	<p>Restrict grading activity to the dry months (generally May 15 – October 15), when associated erosion will be reduced to the maximum extent possible.</p>

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<i>Policies and BMPs</i>	<i>General Description</i>																		
BMP Water Quality-8 Proper disposal of excess materials	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.																		
BMP Water Quality-9 Sidecasting Construction Material	<ul style="list-style-type: none"> • Avoid sidecasting, or at a minimum contain and remove sidecast 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 style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Slope gradient</th> <th style="text-align: left; border-bottom: 1px solid black;">Distance to watercourse</th> <th style="text-align: left; border-bottom: 1px solid black;">Sidecast 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	Sidecast 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
Slope gradient	Distance to watercourse	Sidecast rule																	
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Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. Although the RTMP EIR concludes potential for individual trail projects to affect water quality, it also identified policies and BMPs that address this potential impact.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not violate any water quality standard or otherwise significantly degrade water quality. The projects incorporate the relevant policies, BMPs, and design standards from the RTMP. Therefore, they would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, which concludes that there is not a significant impact to water quality because the BMPs and design standards would minimize erosion and sedimentation impacts. Additionally, the proposed trail improvements are consistent with the EIR's assessment of water quality impacts. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new information with respect to water quality that is of substantial importance requiring new analysis or verification.

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)?

Existing Resources

There are three main groundwater basins in the vicinity of the MCOSD lands. Their designation and a brief description are as follows:

The Novato Valley Basin is a 32 square mile structural depression north of San Rafael and west of San Pablo Bay. Streams discharging to San Pablo Bay drain the basin and are tidally influenced in their lower reaches. Water in the basin occurs primarily in semi-confined alluvial deposits composed of unconsolidated clay, silt, sand, and intermittent gravel lenses. The alluvial deposits range from 60 to 200 feet thick and 25 to 50 feet deep wells yield an average of 50 gallons per minute. Groundwater type is typically calcium bicarbonate with the tidally influenced alluvium showing

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sodium chloride type. Tidal fluctuations can introduce brackish water into the groundwater reservoir, degrading water quality (MCOSD, 2014a).

The smaller 1.4 square mile San Rafael Valley Groundwater Basin is centered near the City of San Rafael, and is bounded on the east by San Rafael Bay. The basin margins approximate the border between the artificial bay fill and alluvium, and the surrounding bedrock. There is minimal to no data on groundwater levels, storage capacity, yield, or quality of this basin (MCOSD, 2014a), although prior reports have suggested that sea-water intrusion may be a problem with water quality.

The 2.8 square mile Ross Valley Basin covers portions of the towns of Corte Madera and Larkspur, with Corte Madera Creek defining its northern boundary and San Francisco Bay to the east. Similar to the San Rafael Valley groundwater basin, the basin margins closely follow where the artificial fill and alluvium meet the surrounding bedrock with the water bearing sediments composed of the unconsolidated alluvium. Again, there is little data available to characterize groundwater levels, storage capacity, yield, or quality of this basin (MCOSD, 2014a).

The project site lies entirely within the Ross Valley Groundwater Basin.

Project Impacts

With respect to the proposed projects, the MCOSD would not use groundwater during its construction and operation of the trails. The project sites do not contain any impervious surfaces and the projects would not require the use of any paving. Although the projects would slightly increase the amount of compacted surfaces in the preserve, the new trails would be designed to be hydrologically invisible. This means that, through the use of out-sloping, grade reductions, and other measures recommended in the RTMP, the trails would not significantly disturb the flow of water over the project site. This impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the plan would have a “less than significant” impact on this issue area and would not require additional mitigation.

Implementation of the RTMP would not result in the use of groundwater or interfere with groundwater recharge. This impact would be less than significant.

With implementation of the net environmental benefit policy [Policy SW.4], there would be no net increase in the environmental footprint of roads and trails with implementation of the RTMP. 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.

...

Based on the foregoing, because construction and operation of roads, trails, and limited parking facilities would not substantially reduce aquifer recharge, this would be a less-than-significant impact [MCOSD, 2014a, p. 11 – 84].

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Applicable Policies and BMPs

The RTMP and its EIR does not contain any policies or BMPs that address ground water recharge.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not deplete ground water. The projects do not require the use of groundwater or increase the amount of impervious surfaces, and therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, which concludes that the implementation of the plan will not result in the depletion of groundwater resources. Additionally, the proposed trail improvements are consistent with the EIR's assessment of hydrology impacts. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to groundwater recharge that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

The project sites are crossed by Sutton Manor Creek, which drains to Arroyo Corte Madera del Presidio, part of the Richardson Bay Watershed.

Project Impacts

The proposed projects includes installing 4,042 feet of trail realignments and decommissioning 2,492.2 feet of existing trails, with the net result being an increase of 1,549.8 feet of trail. Most of the decommissioning would include ripping the existing trail tread and restoring the affected areas to natural conditions. Although the net result of these projects are to increase the area of compacted surfaces, this impact is not significant because the projects include installation of drainage features to dewater the trails, including outsloping, water dips, reduced running slope, and other BMPs aimed at making the trails hydrologically invisible. Additionally, the proposed projects include the replacement to two failing culverts along Sutton Manor Creek. These culverts are interfering with existing stream flow and their replacement would restore more natural flows to the stream. Therefore, the proposed projects would not substantially alter existing drainage patterns in a manner that increases erosion and sedimentation and this impact is less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the plan would have a "less than significant" impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

Implementation of BMPs General-10 and Water Quality-5 would ensure ongoing oversight and evaluation of the MCOSD trail and road system including stream crossings and trails in close proximity to sensitive water resources. Regular inspections of roads and trails at points where they directly impact streams and sensitive water resources by district staff will facilitate early observation of potential erosion, sedimentation and other threats. Through these BMPs, the MCOSD can direct maintenance efforts to specific sites before problems become significant.

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...

Implementation of the RTMP policies, standards, and BMPs cited in Tables 11-7 through 11-10 for improving the road and trail system, moving facilities out of the sensitive and erosion-prone locations, standardizing sustainable road and trail designs, and implementing BMPs would reduce or avoid potential impacts to water quality from improperly sited, designed, or constructed roads and trails. At a programmatic level, this would be a less-than-significant impact and no mitigation would be necessary [MCOSD, 2014a, pp. 11-81 – 11-82].

Applicable Policies and BMPs

Table 14: Erosion and Sedimentation Policies and BMPs

Policies and BMPs	General Description
CWP Policy BIO-4.14 Reduce Road Impacts in Stream Conservation Areas	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.
BMP Water Quality-1 Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas	<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.wrf.noaa.gov/mtr/sunset.php). <p>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>
BMP Water Quality-7 Culvert inspection	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 watercourse, 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.

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. Although the RTMP EIR

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concludes potential for individual trail projects to alter drainage patterns, it also identified policies and BMPs that address this potential impact.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not alter drainage patterns on the sites. The stream crossings and culvert replacements would not alter the drainage pattern of Sutton Manor Creek. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to drainage patterns at the sites that are of substantial importance requiring new analysis or verification. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts.

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?

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?

Existing Resources

As discussed, the project sites drain to Sutton Manor Creek, which drains to Arroyo Corte Madera del Presidio, part of the Richardson Bay Watershed. The existing undersized culverts currently restrict stormwater flow through the site.

Project Impacts

There are two culverts along the Bob Middagh Trail that the MCOSD would replace as part of the project. These culverts are currently undersized and the new culverts would be sized to accommodate predicted flows within the creek. As described above, the projects would reduce the hydrological impacts of the existing trails within the preserve. The proposed trails include frequent drain dips, outsloping, culvert replacement, and slope reduction features to reduce the volume of runoff from the trails. The net effect of these improvements is to move water off the trail surfaces as quickly as possible and drain them into the adjacent natural landscape. With these improvements, the projects would reduce the concentration of runoff and water velocity over what currently occurs on these trails.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

With implementation of the RTMP, future development of impervious surfaces such as roadways, trails, or parking areas with hardened gravel or asphalt surfaces could limit infiltration and increase runoff volumes and peak flows. Increased runoff volumes and peak flows associated with impervious surfaces may lead to increased erosion and resultant pollution, or overwhelm downstream storm drain facilities or

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waterways. Because the development of large areas of impervious surfaces would be rare within MCOSD open space preserves and the RTMP contains policies to avoid these adverse effects, this impact would be less than significant.

Existing and proposed policies of the MCOSD seek to reduce the development of additional impervious surfaces. The RTMP does not include plans for large developments or extensive facilities within the preserves, but rather emphasizes the preservation of riparian corridors and sensitive wetland areas that provide for increased stormwater infiltration and detention, and the decommissioning of redundant and unstable roads and trails. The decommissioning of roads and trails would result in an overall reduction in the number of trails and compacted surfaces rather than an increase.

...

Implementation of BMPs General-10 and Water Quality-5 would ensure ongoing oversight and evaluation of the MCOSD trail and road system including impacts from stormwater runoff. Regular inspections of roads and trails by district staff will facilitate early observation of potential increases or significant changes in stormwater runoff patterns. This will help evaluate the performance of new facilities and remedy any potential problems caused by changes in stormwater runoff.

...

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 (MCOSD, 2014a, pp. 11–82 to 11–83).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. Although the RTMP EIR concludes potential for individual trail projects to alter drainage patterns and contribute to runoff, it also identified policies and BMPs that address this potential impact.

Applicable Policies and BMPs

Table 15: Flooding and Stormwater Runoff Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
CWP Policy BIO-4.14 Reduce Road Impacts in Stream Conservation Areas	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.
BMP Water Quality-1 Modifications to Road	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

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<i>Policies and BMPs</i>	<i>General Description</i>
and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas	<p>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). <p>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>
BMP Water Quality-7 Culvert inspection	<p>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.</p>

Conclusion

As required by the RTMP EIR, the proposed projects include design standards and BMPs to address runoff, and the MCOSD designed the projects to be hydrologically invisible. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to drainage patterns and runoff that is of substantial importance requiring new analysis or verification.

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?

Project Impacts

The projects do not include any housing and is not located within a 100-year flood hazard zone (FEMA, 2016). The project would have no impact under this criterion.

Conclusion

Similar to that concluded in the RTMP EIR, the proposed projects would not include housing within a 100-year flood hazard zone. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to housing within a 100-year flood hazard zone that is of substantial importance requiring new analysis or verification.

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

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?

Existing Resources

The projects would not be located within a 100-year flood hazard zone (FEMA, 2016). Sutton Manor Creek is the only stream that is within the project site, there are no levees or dams in the project area.

Project Impacts

With the proposed modifications to the Bob Middagh Trail, including the replacement of the culverts with ones properly sized for the watershed, the project would improve flood flows through the site and reduce the risk of flooding. The projects would not be located within a 100-year flood hazard zone and would not expose people or structures to flooding hazards.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

Proposed RTMP Policy SW.31, Floodplain Policy for New and Improved Roads and Trails addresses flooding. ...

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 (MCOSD, 2014a, pp. 11-85 – 11-86).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts

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from project modifications, changed circumstances, or new information. Although the RTMP EIR concludes potential for individual trail projects to flooding, it also included a policy that addresses this potential impact.

Applicable Policies and BMPs

Table 16: Flood Hazard Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
CWP Policy BIO-4.14 Reduce Road Impacts in Stream Conservation Areas	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.
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.
BMP Water Quality-1 Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas	<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.wrfh.noaa.gov/mtr/sunset.php). <p>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>
BMP Water Quality-7 Culvert inspection	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.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not increase the risk of flooding. Because of the trails' design improvements, would reduce the risk of flooding. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to flooding that is of substantial importance requiring new analysis or verification.

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

Existing Resources

The project sites are not located near a large body of water that would be subject to seiches or tsunami. Elevations within the Alto Bowl Preserve range from 100 feet to 400 feet, and the site is located several miles away from areas subject to tsunamis.

Project Impacts

As a result of the distance to the San Francisco Bay and the elevation of the project sites, they would not be affected by seiche or tsunami. Based on the slope stability analysis described in Geology and Soils Section above, mudflows are not likely to be a problem in the project area and implementation of the trail improvements would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a "less than significant" impact on this resource area and will not require additional mitigation. Specifically, the EIR states that:

Although the RTMP could lead to the construction, decommissioning, or maintenance of roads, trails, and associated facilities in or near areas subject to seiche, tsunami, or mudflows, this impact would be less-than-significant.

Many of the same areas subjected to potential flooding listed under Impact HYD-5 are also at risk of sudden high water from a tsunami event. Marin County is in a seismically active area as described in Chapter 8, Geology and Soils, that could result in a rare yet catastrophic tsunami event. Construction, decommissioning, or maintenance of MCOSD facilities will not impact the potential occurrence of a seiche or tsunami, but facilities Marin County Open Space District 11-86 Road and Trail Management Plan located in the tsunami inundation zone could put users at risk in the event of a tsunami or seiche.

Proposed RTMP Policy SW.31 as set forth in Impact HYD-5, would require that tsunami inundation maps be consulted when planning and designing new facilities to determine which locations will require escape plans or notification of users. Because implementation of this policy would protect users from hazards due to tsunami, this would be a less-than-significant impact.

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Risk of mudflows is similar in location and cause to risks posed by slope instabilities or landslides as described under Impact GEO-2 in Chapter 8, Geology and Soils. Policies and procedures in the RTMP will ensure the location and type of any existing or new road or trail would be evaluated, selected, and designed to avoid or minimize risks from slope instability or landslide, this impact would be less than significant (see Impact GEO-2 for discussion of specific policies).

A seiche is a standing, oscillating wave generated in an enclosed water body such as a lake, or bay due to seismic or meteorological effects (including earthquake, wind, or landslide). Seiches are rare occurrence and only pose a danger when they occur in a large water body that can create a large wave or in reservoirs where they can overtop the dam and impact its stability. There are no large dammed reservoirs or large lakes located in MCOSD preserves, so there is a less-than-significant impact from seiches forming in lakes. Risks from a seiche in bays would be similar to risks from tsunami and will be mitigated in conjunction with that impact (MCOSD, 2014a, pp. 11-86 to 11-87).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. Although the RTMP EIR concludes the potential for individual trail projects to be affected by these hazards, it also identified policies and BMPs that address this potential impact.

Applicable Policies and BMPs

Table 17: Flood Hazard Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
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.
BMP Geologic Hazards-2: Construction in Areas of Slides and Debris Flows	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.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not expose people to significant risks associated with seiches, tsunamis, or mudflows. The Alto Bowl Preserve is not located in an area subject to these hazards. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to

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seiches, tsunamis, or mudflows that is of substantial importance requiring new analysis or verification.

K. LAND USE AND PLANNING

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Physically divide an established community?	Section 14.4.2 Page 14-10	No	No	No	NA
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?	Section 14.4.2 Page 14-10	No	No	No	NA
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	Section 14.4.2 Page 14-10	No	No	No	NA

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

Existing Resources

The project site is located within the Alto Bowl Open Space Preserve, in Mill Valley. The site totals 37 acres and is crossed by Sutton Manor Creek, which flows from a residential area, located at the south end of Sausalito Street in Corte Madera, through the project site. The site is used for public recreation and is surrounded by residential development in the Town of Corte Madera to the north and east, residential development in the City of Mill Valley and the Horse Hill Open Space Preserve to the south and the Camino Alto Open Space Preserve to the west.

Project Impacts

The proposed trail project would not physically divide an established community. The new trails are in the middle of an existing open space preserve, which functions as a community divider between the City of Mill Valley and the Town of Corte Madera. The proposed modifications to the trail would not otherwise divide or change an established community. This impact would be less than significant.

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Relationship to the RTMP

The RTMP EIR concludes that the plan would have no impact on this issue area and would not require additional mitigation. Specifically, the EIR states that:

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 (MCOSD, 2014a, pp. 14 – 10).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR concludes that there is no potential for individual trail projects to divide an established community and did not identify any policies or BMPs to address this issue.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not physically divide an established community and implementation of the project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and the proposed trail improvements are consistent with the EIR's assessment of land use impacts. There are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new information with respect to established communities that is of substantial importance requiring new analysis or verification.

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?

Project Impacts

The proposed trail projects are located within the Alto Bowl Preserve and are consistent with the zoning and general plan designations that apply to the site. The Mill Valley 2040 General Plan designates this preserve as "Open Space." The City has zoned all of the parcels affected by the proposed trail projects as "Open Area (OA)." Permitted uses in the OA zone include: 1) public parks and recreation areas; 2) equestrian and hiking areas; and 3) accessory structures. No specific plans, other than the RTMP, apply to the project site. This impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a "less than significant" impact on this resource area and will not require additional mitigation, by concluding that:

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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 (MCOSD, 2014a, p. 14-10).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR concludes that there is no potential for individual trail projects to affect land use planning or zoning.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect land use plans or zoning designations for the area. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to land use planning that is of substantial importance requiring new analysis or verification.

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

Project Impacts

There are no adopted habitat conservation plans or natural community conservation plans affecting land within Marin County and therefore the project would have no impact.

Relationship to RTMP

The RTMP EIR concludes that the plan will have no impact on this issue area and will not require additional mitigation, by concluding that:

The project area does not include any approved habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. For this reason, implementation of the RTMP would not conflict with any conservation plan. No significant impact would result and no mitigation would be necessary (MCOSD, 2014a, p. 14-10).

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Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR concludes that there is no potential for individual trail projects to affect any conservation plan.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, there are no habitat or natural communities conservation plans affecting land within Marin County. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to conservation plans that is of substantial importance requiring new analysis or verification.

L. MINERAL RESOURCES

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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?	Section 14.5.2 Page 14-12	No	No	No	NA
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?	Section 14.5.2 Page 14-12	No	No	No	NA

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?

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?

Project Impacts

As described in the RTMP EIR, there are only two mineral resource sites located on open space preserves (Ring Mountain and Mt. Burdell Preserve (MCOSD, 2014a)) and neither of these sites is within the Alto Bowl Preserve. Therefore, the proposed projects do not have any potential to affect mineral resources.

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Relationship to the RTMP

The RTMP EIR concludes that the plan will have no impact to this resource area, by stating that:

Although there are two designated mineral resource zones within the MCOSD preserves, the proposed RTMP would not affect the status of either site. The Ring Mountain mineral resources would continue to be protected within the existing 300-acre preserve. The existing MCOSD mineral resource protection policies that regulate the site located within the Mount Burdell Open Space Preserve would be unchanged by implementation of the RTMP. Therefore, implementation of the RTMP would not interfere with the planned extraction of any mineral resource. There would be no impacts and no mitigation would be necessary (MCOSD, 2014a, p.14-12).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR concludes that there is no potential for individual trail projects to affect mineral resources.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies or BMPs to address this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect known mineral resources. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to mineral resources that is of substantial importance requiring new analysis or verification.

M. NOISE

Environmental Issue Area Would the Project result in:	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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?	Section 12.2.4 Page12-9	No	No	No	Yes
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Section 12.2.4 Page12-18	No	No	No	Yes

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Environmental Issue Area Would the Project result in:	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
c. A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	Section 12.2.4 Page12-9	No	No	No	Yes
d. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	Section 12.2.4 Page12-9	No	No	No	Yes
e. For a Project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	Section 12.2.3 Page12-9	No	No	No	NA
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?	Section 12.2.3 Page12-9	No	No	No	NA

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

Existing Resources

Existing noise levels at most of the MCOSD's preserves are similar to that found in rural areas of Marin County, except where preserves abut developed residential areas or major transportation facilities such as U.S. 101. Near residential areas or roadways, noise levels within preserves would be dominated by those sources. Except for noise levels near major roadways, noise levels within and adjacent to preserves are expected to range from 40-60 dBA during daytime, and from 20-40 dBA at night (MCOSD, 2014a). The Alto Bowl Open Space Preserve is located near Highway 101 and is surrounded by residential areas.

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Project Impacts

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 upgrades. Construction equipment would include a small trail dozer, known as a “SWECO,” mini excavator, and other powered equipment. During ground clearing activities, noise levels could reach 89 decibels on the A-weighted scale (dBA). Most of the trail work would be within the interior of the preserve well away from private property. However, portions of both the Gas Line and Bob Middagh Trails are near existing houses. Additionally, the decommissioning of the social trail on the east side of the preserve and rerouting portions of the Horse Hill Trail are near private residences. The projects could expose these receptors to noise levels of 70 to 85 dBA during construction.

Construction noise impacts would be short-term and would only occur Monday through Friday from 7:00 AM to 4:00 PM, over a period of about eight weeks. During this time, the MCOSD would comply with the BMPs found in the RTMP, which include BMP Noise-1 and BMP Noise-2. BMP Noise-1 requires compliance with Marin County Ordinance 3431, Construction Noise. This ordinance adds Sections 6.70.030(5) and 6.70.040 to the Marin County Code related to construction activities and related noise, and penalties for violations. Under this code, construction activities are limited to Monday through Friday from 7:00 AM to 6:00 PM, and Saturday from 9:00 AM to 5:00 PM. The ordinance does not allow construction on Sundays or holidays. The actual work impact would be less than required by the code, in that the MCOSD’s trail staff usually works only four days a week, Monday through Thursday.

Over time, use of the trail could increase either with or without the project, depending on the demand for hiking trails in this vicinity. After completion of the project, some people who currently do not want to use the existing trails, because of substandard condition, may decide to use these trails. Additionally, re-designating the Bob Middagh Trail to allow bicycle use may also increase noise levels. However, this impact is not significant, because any noise from bicycle use consists either of the sound a human-powered vehicle or of unamplified voices. These noises would not be significantly loud and are consistent with the sound generated by other recreational users of the preserve, including hikers and equestrians. Therefore, the projects would not result in a substantial permanent increase in ambient noise levels in its vicinity when compared to existing conditions. As stated in the RTMP EIR, Marin County Code and the MCOSD Code prohibit excessive noise generated by recreational users of the open space preserves (MCOSD, 2014a). Therefore, the projects would not result in a substantial permanent increase in ambient noise this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

Implementation of the RTMP would involve maintenance and construction activities that could increase noise levels in the vicinity of the work areas where these activities take place. The RTMP could result in the rerouting of roads or trails or the creation of new trailheads adjacent to existing residential uses, raising noise levels for those residents. In addition, the use of some roads and trails may increase over time, increasing noise levels from vehicles bringing users to the trailheads, and from road and trail users themselves. The RTMP may also result in changes in the location of special events held within preserves. However, the RTMP would not result in a substantial overall increase in these activities. Regarding construction and maintenance, implementation would influence the specific projects that would be

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undertaken, and thus may result in increases in noise levels at specific locations in any given year. All future construction or maintenance activities initiated under the RTMP would meet Marin County noise standards. Excessive noise generated by recreational users of the open space preserves and special events within preserves is, and would continue to be, prohibited under the Marin County Code and the MCOSD Code. For these reasons, this impact would be less than significant (MCOSD, 2014a, p. 12-10).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. Although the RTMP EIR concludes that there is a potential for individual trail to have noise impacts, it also identified policies and BMPs that address this potential impact.

Applicable Policies and BMPs

BMP Noise-2 of the RTMP addresses noise control during construction within and adjacent to sensitive wildlife populations; it contains provisions to ensure that the best available noise-control techniques are used to prevent wildlife disturbances, and that construction (except for emergency projects) is prohibited during nighttime hours and during breeding seasons in areas adjacent to sensitive wildlife populations.

Table 18: Noise Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
CWP NO-1.2: Minimize Transportation Noise	Ensure that transportation activities do not generate noise beyond acceptable levels, including in open space, wilderness, wildlife habitat, and wetland areas.
CWP NO-1.3: Regulate Noise Generating Activities	Require measures to minimize noise exposure to neighboring properties, open space, and wildlife habitat from construction-related activities, yard maintenance equipment, and other noise sources, such as amplified music.
CWP Implementing Program NO-1.i: Regulate Noise Sources; and Marin County Ordinance 3431	Sections 6.70.030(5) and 6.70.040 of the Marin County Code establish allowable hours of operation for construction-related activities.
PRI Policy T1g	The MCOSD will prohibit the use of motorized vehicles on open space, with authorized exceptions.
RTMP Policy SP-1: Lease/License/Other Form of Approval Required for Land Management or Utility Activities	Consistent with MCOSD's Nonconforming Use Policy, all agencies and service providers requesting access to open space lands will be required to obtain a lease, license, or other form of approval from the MCOSD 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, weather, the protection of natural resources, and the location of the activity. The MCOSD Nonconforming Use Policy provides specific guidance for permitting use of open space by utilities, water districts, and other similar entities.
RTMP Policy SP-2: Permit Required for Organized Recreational Activities or Events	All private parties or other 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 permit applicant for administration and monitoring of the event by the MCOSD staff, or if compliance with the California Environmental Quality Act or any environmental permit is required. The MCOSD insurance and indemnity requirements will also apply.
RTMP BMP General-1: Limit Work Area Footprints in Sensitive Resource Areas	Limit the size of construction-related road and trail management activities to the minimum size needed to meet project objectives. BMPs include: 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.

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<i>Policies and BMPs</i>	<i>General Description</i>
	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
RTMP BMP Invasive Plants-4: Limited Soil Disturbance	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: Plan all road and trail management activities to disturb as little area as possible.
RTMP BMP Construction Contracts-1: Standard Procedures in Construction Contracts	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.
RTMP BMP Noise-1: County Noise Ordinance Requirements	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.
RTMP BMP Noise-2: Noise Control during Construction within and Adjacent to Sensitive Wildlife Populations	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.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not have significant noise effects. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to noise impacts that is of substantial importance requiring new analysis or verification.

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

Existing Resources

Groundborne noise is that which is experienced inside a building or structure from vibrations produced outside of the building and transmitted as ground vibration between the source and receiver. Groundborne noise can be a problem in situations where the primary airborne noise path is blocked, such as in the case of a subway tunnel passing near homes or other noise-sensitive structures.

There are no adopted state or local policies or standards for groundborne vibration. The average person is quite sensitive to ground motion, and the human body can detect levels as low as 0.50 millimeters per second (0.02 inch per second), when background noise and vibration levels are low. Vibration intensity is expressed as peak particle velocity (PPV), the maximum speed at which the ground moves while it temporarily shakes. Since groundshaking speeds are very slow, PPV is measured in inches per second. The Federal Railway Administration and the Federal Transit Administration have published guidance relative to vibration impacts. According to the Federal Rail Administration, fragile buildings can be exposed to groundborne vibration PPV levels of 0.5 inch per second without experiencing structural damage. Caltrans recommends that extreme care be taken

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when sustained pile driving occurs within 25 feet of any building, or within 50 to 100 feet of a historic building or a building in poor condition. Groundborne vibration from construction activities that involve “impact activities,” primarily pile driving and use of a hoe ram to break concrete, could produce detectable or significant vibration at nearby sensitive buildings and sensitive receptors unless proper mitigation is followed.

Project Impacts

The proposed project’s noise and vibration generating construction activities would involve shallow excavation and ground disturbance. The projects would not include any pile driving or blasting. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. This analysis applies a significance threshold of cosmetic damage to buildings of 0.5 inch per second (in/sec) PPV. Typical vibration levels from various types of construction equipment at 25 feet are listed below.

Table 19: Groundborne Vibrations

Vibration Source	Peak Particle Velocity (in/sec)^a At 25 Feet
Large vibratory compactor (Truck-mounted)	0.210
Large bulldozer/earthmoving equipment	0.089
Loaded trucks	0.076

Source: FTA, 2006.

^a Vibration amplitudes for construction equipment assume normal propagation conditions.

^b By comparison, pile driving activities result in 1.518 PPV (in/sec) at 25 feet.

As indicated in the table above, project-related construction activities would generate vibration levels well below the 0.5-in/sec PPV vibration threshold for adjacent buildings. This would be true even if two pieces of equipment (e.g., excavator and dozer) were both operating 25 feet from a structure and the closest residence is located approximately 250 feet away from the closest construction activities. Therefore, vibration effects on adjacent or nearby offsite buildings or structures would be less than significant. Following completion of construction, there would be no permanent exposure of persons to or long-term generation of excessive groundborne vibration or groundborne noise levels.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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.

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.

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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 (MCOSD, 2014a, pp. 12-18 – 12-19).

Applicable Policies and BMPs

BMP Noise-2 of the RTMP addresses noise control during construction within and adjacent to sensitive wildlife populations; it contains provisions to ensure that the best available noise-control techniques are used to prevent wildlife disturbances, and that construction (except for emergency projects) is prohibited during nighttime hours and during breeding seasons in areas adjacent to sensitive wildlife populations.

BMP Noise-2 of the RTMP addresses noise control during construction within and adjacent to sensitive wildlife populations; it contains provisions to ensure that the best available noise-control techniques are used to prevent wildlife disturbances, and that construction (except for emergency projects) is prohibited during nighttime hours and during breeding seasons in areas adjacent to sensitive wildlife populations.

Table 18 above identifies all relevant policies and BMPs related to ground born noise and vibration.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would expose people to excessive ground borne vibration and noise. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to ground borne vibration and noise that is of substantial importance requiring new analysis or verification.

- 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?***
- 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?***

Existing Resources

The closest airport with an associated land use plan area is the Gness Field in Novato, approximately 16 miles north of the sites. Similarly, there are no private airstrips in the project area.

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Project Impacts

The project sites are not located within an airport land use plan area or within two miles of a public or private airport. Therefore, the projects would not expose people to excessive noise from aircraft activity.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

Mount Burdell and Rush Creek Preserves are located less than a mile from Gness Field. Santa Venetia Marsh Preserve is located less than 0.2 miles from the end of the Smith Ranch Airport runway. There are no preserves in the vicinity of Richardson Bay Heliport. However, the RTMP would neither increase the number of people living or working on preserves nor influence the frequency or flight paths of air traffic. Therefore, the proposed project would not change the exposure of people living or working near one of these fields. This would be a less-than significant impact and no mitigation would be needed (MCOSD, 2014a, p. 12-19).

Mitigation, Policies, and BMPs

The RTMP and its EIR did not identify any mitigations, BMPs, or policies to address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not expose people to excessive noise from a private or public airport. The Alto Bowl Preserve is not located near any airport and the projects would not expose people to this hazard. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to private or public airports that is of substantial importance requiring new analysis or verification.

N. POPULATION AND HOUSING

Environmental Issue Area: Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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)?	Section 14.6.2 Page 14-13	No	No	No	NA

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Environmental Issue Area: Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Section 14.6.2 Page 14-13	No	No	No	NA
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Section 14.6.2 Page 14-13	No	No	No	NA

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)?

Existing Resources

The project sites are an open space preserve that is used for recreation, including hiking, horseback riding, dog walking, and bike riding. The site is undeveloped with the exception of the trails, and provides no housing or business opportunities.

Project Impacts

The proposed projects would modify the Bob Middagh and the Gas Line Trails to bring them up to current design standards and change the designated uses of the Bob Middagh trail to allow bicycle use. As described in the RTMP EIR, these projects would not affect existing infrastructure, modify general plan or zoning designations, or result in the need for new workers. Thus, these projects would not have any impact on population growth in the area and the projects do not require additional mitigation measures, policies, or BMPs.

Relationship to the RTMP

The RTMP EIR concludes that implementation of the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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.

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The impact of growth inducement would be less than significant and no mitigation would be required (MCOSD, 2014a, p. 14-13).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information. The RTMP EIR concludes that there is no potential for individual trail projects to affect population growth.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies and BMPs that address this potential impact.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect population growth. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to population growth that is of substantial importance requiring new analysis or verification.

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

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

Existing Resources

As discussed above, the Alto Bowl Preserve does not contain any housing.

Project Impacts

The proposed projects are located in an area that the MCOSD manages as protected open space. There are no residential units within the Alto Bowl Preserve and, as such, the projects would not displace any existing housing or people. Therefore, the projects would have no effect on this issue area.

Relationship to the RTMP

The RTMP EIR concludes that the plan will have a “less than significant” impact on this issue area. Specifically, the EIR states that:

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.

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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 (MCOSD, 2014a, p. 14-13).

Under Section 15162 of the CEQA Guidelines, the MCOSD has to evaluate a project implemented under a program EIR to determine if there are new significant or substantially more severe impacts from project modifications, changed circumstances, or new information.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any policies and BMPs that address this potential impact.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect existing housing. Therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to housing that is of substantial importance requiring new analysis or verification.

O. PUBLIC SERVICES

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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 the public services					
Police protection?	Section 14.7.2 Page 14-15	No	No	No	NA
Schools?	Section 14.7.2 Page 14-15	No	No	No	NA
Parks?	Section 14.7.2 Page 14-15	No	No	No	NA

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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 the public services					
Other public facilities?	Section 14.7.2 Page 14-15	No	No	No	NA

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?

Existing Resources

The project site is located in Mill Valley and is served by the Mill Valley police and fire departments. The project site is an open space preserve owned and maintained by Marin County and includes no park facilities (restrooms, playgrounds etc.).

Project Impacts

The projects would not generate the need for new or altered fire, police, school, park, library, or other public facilities. Existing emergency response personnel would serve the site, and the projects would not increase emergency response demands. Existing emergency access would be maintained and therefore the project would not affect existing public services.

Relationship to the RTMP

The RTMP EIR concludes that:

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 (MCOSD, 2014a, p. 14-15).

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Applicable Policies and BMPs

The RTMP and its EIR did not identify any BMPs or policies to address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not affect existing or require new government facilities and the project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, which concludes that there is no impact to this issue area because the implementation of the plan will not affect existing or require new governmental facilities. Further, there is no new information with respect to public services that is of substantial importance requiring new analysis or verification.

P. RECREATION

Environmental Issue Area	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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?	Section 14.8.2 Page 14-17	No	No	No	NA
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?	Section 14.8.2 Page 14-19	No	No	No	NA

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?

Existing Resources

The project site is a Marin County Open Space District preserve that is used for recreation, including hiking, biking, horseback riding, and dog walking, located in the Alto area of Mill Valley.

Project Impacts

The proposed projects include modifications to the existing trails to reduce erosion and sediment impacts from the existing facility and to improve recreational experience by reducing the grade of the trail, improving sight lines, and expanding use to allow mountain bikes. These changes would have a net improvement on the recreational users and would not impact other regional or local parks.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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 trails.

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 (MCOSD, 2014a, pp. 14-17 – 14-18).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any BMPs or policies to address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not result in the increased use of existing recreational facilities. MCOSD manages the Alto Bowl Preserve for habitat protection and recreational uses and the project would improve the recreational facilities within the preserve. The proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR and the proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR. There is no new information with respect to increased use of existing recreational facilities that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

The project area is used for ongoing recreation, including hiking, horseback riding, biking, and dog walking.

Project Impacts

As described above, the proposed projects would be an upgrade to existing recreational trails to reduce erosion and sediment impacts, improve user access and safety, and allow bicycle use on the Bob Middagh Trail. As a result, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

Although the implementation of the RTMP would result in the elimination of some roads and trails, it would allow for the construction of new trails. Chapter 5 of the RTMP describes a process by which MCOSD will inventory the physical and environmental conditions of its road and trail and will use that information, along with its decision making tool, to develop priorities for the funding and implementation of maintenance and new construction projects. This mathematical decision making tool will evaluate the following characteristics of existing and proposed roads and trails:

- *environmental (potential for natural and cultural resource impacts)*
- *physical (slope, orientation to the fall line, redundancy, and the existing physical conditions that affect sustainability)*
- *social (potential contribution to the visitor experience)*

Environmental and physical criteria evaluate the general sustainability of the roads and trails within the context of the larger system of preserves. Scores for these two categories of criteria will be added together to yield the total “biophysical” impact of a road or trail segment or collection of segments.

Page 5-1 of the RTMP states, “The primary objectives of all Road and Trail Management Plan projects and the drivers of all decisions regarding project selection and prioritization are to:

- *achieve continuous measurable reductions in physical and environmental impacts associated with the road and trail network and*
- *enhance visitor experience and safety*

The MCOSD will use the decision model to select projects that reduce the environmental impacts of the entire system. Thus, while the RTMP will involve the construction of some new roads and trails over time, these will not result in a net environmental impact. Therefore, the RTMP would not require new or expanded

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recreational facilities elsewhere and would have a less than significant impact on this resource issue, and no mitigation would be required (MCOSED, 2014a, p9. 14-19 – 14-20).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any BMPs or policies to address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not require the construction or expansion of recreational facilities and the project would enhance the environment and improve the recreational resources of the Alto Bowl Preserve. The proposed projects accomplish these goals by reducing erosion and sedimentation and improving the trails for recreational use. The proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR, and the projects are consistent with the circumstances described in the RTMP EIR. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts and there is no new information with respect to recreation facilities that is of substantial importance requiring new analysis or verification.

Q. TRANSPORTATION AND TRAFFIC

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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?	Section 13.2.4 Page 13-16	No	No	No	Yes
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Section 13.2.4 Page 13-18	No	No	No	Yes

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/Resolve Impacts?
c. 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?	Section 13.2.3 Page 13-15	No	No	No	NA
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Section 13.2.3 Page 13-15	No	No	No	NA
e. Result in inadequate emergency access?	Section 13.2.4 Page 13-19	No	No	No	Yes
f. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	Section 13.2.4 Page 13-21	No	No	No	Yes

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?

Existing Resources

The projects are located within the City of Mill Valley and subject to the City of Mill Valley General Plan regarding traffic and circulation. Access to the project site is via Coach Road and Camino Alto in the City of Mill Valley and Sausalito Street in the Town of Corte Madera.

Project Impacts

The proposed project would not have significant impacts on public roads, as the purpose of the projects is to modify existing trails to reduce their environmental impacts, improve safety, and increase opportunities for mountain biking in the preserve. Some increased use is likely because of the trail improvements and the change in use designation for the Bob Middagh Trail. However, any increase in use is not likely to be significant because parking capacity in the adjacent neighborhood is limited and this trail network is not a destination that brings a significant number of visitors from outside the immediate community. One of the purposes of the re-designation of the Bob Middagh Trail is to provide mountain bikes with access to other open space preserves and park areas (including Mount Tamalpais) west of the Alto Bowl Preserve without using public roads. This alternative route would provide bicyclist with a trail that avoids automobile traffic and will encourage people to use off-road bicycles, could reduce traffic on area roadways.

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Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan would have a “less than significant” impact on this issue area and does not require additional mitigation. Specifically, the EIR states that:

In summary, 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. Therefore, this impact would be less than significant, and no mitigation would be required (MCOSD, 2014a, p. 13-18).

Applicable Policies and BMPs

Table 20: Transportation Policies and BMPs

<i>Policies and BMPs</i>	<i>General Description</i>
MCP Policy TR-1.c Promote Transportation Alternatives	Work with local, State, and federal governments, businesses, schools, seniors, and environmental groups to encourage use of transit, vanpools, carpools, car sharing, bicycles, and walking, including providing incentives to employers, commuters, and recreational users to support these transportation alternatives.
MCP Policy TR-1.e Uphold Vehicle Level of Service Standards	Uphold peak-hour vehicle Level of Service standard LOS D or better for urban and suburban arterials and LOS E or better for freeways and rural expressways. Only the Congestion Management Program–specified roadway and highway segments operating at a lower LOS than the standard in 1991 are grandfathered and may continue to operate at the lower LOS standard until such time as the roads are improved or the traffic load or demand is reduced or diverted. An improvement plan should be developed for Highway 101 and the grandfathered roadway segments to address existing deficiencies. Unless determined to be infeasible, alternatives that reduce fossil fuels and single occupancy vehicle use should be considered a priority over infrastructure improvements such as road widening. ...
MCP Policy TR-1.8 Reduce Vehicle Miles Traveled	Reduce the rate of increase for total vehicle miles traveled by single-occupant automobile to not exceed the population growth rate.
PRI 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.
PRI 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.
PRI Policy P3	The MCOSD will encourage open space visitors to walk, bicycle and carpool to open space.
PRI Policy P5	The MCOSD may seek increased parking capacity on a case-by-case basis, including the development of parking facilities on MCOSD lands where necessary for public safety, and where resource conditions permit.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not result in conflicts with an applicable transportation plan, ordinance, or policy. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, and there are no changed circumstances resulting in new significant or substantially more severe impacts. Further, there is no new information with respect to existing traffic policy, plan, or ordinance that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

The Transportation Authority of Marin (TAM) is designated as both the congestion management agency and the transportation sales tax authority for Marin County. As the Congestion Management Agency (CMA), TAM is responsible for managing a variety of transportation projects and programs in Marin County, receiving federal, state, regional, and local funds, working closely with all eleven cities and towns as well as the county. As the CMA, TAM prepares a Congestion Management Plan, monitors levels of service on the county's roadways and works to improve all methods of transportation locally and regionally. The 2015 Congestion Management Plan is the most recent biennial update is required by state statute.

Project Impacts

The proposed project, including the change in use designation to allow bicycles, would not have significant impacts on traffic. These trails already exist and MCOSD already identifies them on its webpage (Marin County Parks, 2017). In addition, the change in use of the Bob Middagh Trail is not likely to have significant increase in traffic impacts. The 2,445- (0.46 mile) foot-long trail is not likely to attract mountain bikers from out of the area to ride on it, rather it would likely be used as a link to access preserves and other open space areas west of the Alto Bowl Preserve. The trail would support alternative transportation by providing a safe connector trail between the communities of Mill Valley and Corte Madera. Since the project would not result in a significant increase in traffic, it would not conflict with Marin County's Congestion Management Program.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a "less than significant" impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

The recreational activities affected by the RTMP would be dispersed throughout the MCOSD's preserves. The RTMP would not generate a significant number of new vehicle trips, nor would it affect weekday peak hour traffic volumes. Any future increases in vehicle trips associated with recreation would be the result of population growth and changes in the relative popularity of recreational activities. However, the opening of new roads and trails, the creation of new access points to existing roads and trails, and the 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, 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 (MCOSD, 2014a, p. 13-19).

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Applicable Policies and BMPs

Table 20 above describes the relevant policies that are applicable to this issue area.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not conflict the Marin County Congestion Management Plan and therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. Further, there is no new information with respect to congestion management plans that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

As discussed above, the nearest airports are the private San Rafael Airport and the public Gross Field Airport in Novato, which are approximately seven and sixteen miles, respectively, north of the project site.

Project Impacts

Implementation of the project would not change air traffic patterns as the project site is located many miles south of the nearest airport and all project activities would be located at ground level. The proposed project would not result in any changes in air traffic patterns.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan would have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

As indicated by the visitor survey described above, 91 percent of visitors live in Marin County and another roughly 3 percent live in Sonoma County. There may be a very small number of visitors who travel to Marin County by airplane; 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. This would be a less-than-significant impact (MCOSD, 2014a, p. 13-15).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any mitigation measures, policies, or BMPs that address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not result in a change in air traffic patterns and therefore, the proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the

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RTMP EIR and there is no new information with respect to air traffic patterns that is of substantial importance requiring new analysis or verification.

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)?

Existing Resources

The project site is located within an open space preserve and no project components are located on area roadways.

Project Impacts

The project does not involve any activities that would affect traffic or transportation hazards on existing streets or roads, and therefore, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan would have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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 (MCOSD, 2014a, p. 13-15).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any mitigation measures, policies, or BMPs that address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not substantially increase traffic hazards due to a design feature. The proposed projects do not include any modifications to existing roads or result in changes of use of these roads, and therefore, would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR.

The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR, which concludes that the plan would not substantially increase traffic hazards due to a design feature. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts, and there is no new information with respect to traffic or transportation hazards that is of substantial importance requiring new analysis or verification.

e) Would the project result in inadequate emergency access?

Existing Resources

Emergency access to the project site is via Sausalito Street in Corte Madera and Camino Alto, Coach Road, Meadowcrest Drive, and Upperhill Drive, in the City of Mill Valley. Emergency service is provided by the City of Mill Valley and Town of Corte Madera.

Discussion

As discussed above, emergency access to the existing trails is available from Camino Alto, Sausalito Avenue, Coach Road, and Alto Bowl Fire Road. The existing and proposed trails are too narrow to allow access for emergency vehicles. During construction, access to the project site would be more limited as a result of the construction equipment and crew; however, the trails would be closed to recreation and emergency access would be maintained during construction. After construction, use of the project site for recreation would continue similar to current conditions. However, the projects would improve access for rangers and emergency responders on foot or using all-terrain vehicles. Overall, the project would have a less than significant impact on emergency access.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan would have a “less than significant” impact on this issue area and would not require additional mitigation. Specifically, the EIR states that:

Implementation of Systemwide Policies SW.19, SW.20, and SW.21 would ensure continued access to open space preserves for fire fighters and other emergency personnel. Therefore, implementation of the RTMP would not lead to inadequate emergency access. This impact would be less than significant, and no mitigation would be required (MCOSD, 2014a, p. 13-21).

Applicable Policies and BMPs

Table 21: Emergency Access Policies and BMPs

<i>Mitigations, Policies, and BMPs</i>	<i>General Description</i>
RTMP Policy SW.19 Redundant Roads and Trails, which requires coordination with Marin County fire agencies	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.
RTMP Policy SW.20 Conversion of System Roads to Trails, which requires coordination with Marin County fire agencies	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.
RTMP Policy SW.21	Roads or trails subject to or encumbered by license, lease, or easement, for nonrecreational

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<i>Mitigations, Policies, and BMPs</i>	<i>General Description</i>
Roads and Trails Serving Nonrecreational Uses, including roads used for emergency services	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.
MCP Policy TRL-2.8 Provide Trail Information including information for emergency responders	Strive to provide information to trail users that facilitates visitor orientation, nature interpretation, code compliance, and trail etiquette. Develop a methodology for signing trails to assist user and emergency personnel.

Conclusion

Similar to that described in the RTMP EIR, the proposed project would not result in inadequate emergency access. The trail improvements would not affect existing emergency access roads into the preserve and would improve access on the modified trails. Therefore, the proposed projects will not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to existing emergency access that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

As noted previously, the projects are subject to the Marin CMP and policies contained in the Marin CWP, and Mill Valley General Plan regarding public transit, bicycle, or pedestrian facilities.

Project Impacts

The proposed project would be consistent with policies in these applicable plans because they facilitate the use of bicycles to access the preserve and other natural areas to the west. Additionally, the project would implement the RTMP, which also encourages pedestrian and bicycle modes of travel. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and would not require additional mitigation measures beyond those identified in the RTMP and its EIR. This impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a “less than significant” impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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

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these reasons, this impact would be less than significant, and no mitigation would be required (MCOSD, 2014a, p. 13-22).

Applicable Policies and BMPs

Table 22: Public Transit, Pedestrian, and Bicycle Facilities Policies and BMPs

Policies and BMPs	General Description
PRI 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.
PRI 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.
PRI Policy P3	The MCOSD will encourage open space visitors to walk, bicycle and carpool to open space.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The projects would improve bicycle access to the preserve and to the Mount Tamalpais area and would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and there is no new information with respect to adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities that is of substantial importance requiring new analysis or verification.

R. UTILITIES AND SERVICE SYSTEMS

Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Section 14.9.2 Page 14-22	No	No	No	NA
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?	Section 14.9.2 Page 14-22	No	No	No	NA
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Section 14.9.2 Page 14-22	No	No	No	NA
d. Have sufficient water supplies available to	Section 14.9.2	No	No	No	NA

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Environmental Issue Area Would the Project ...	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	Page 14-22				
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?	Section 14.9.2 Page 14-22	No	No	No	NA
f. Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	Section 14.9.2 Page 14-23	No	No	No	NA
g. Comply with federal, state, and local statutes and regulations related to solid waste?	Section 14.9.2 Page 14-23	No	No	No	NA

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

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?

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?

Project Impacts

There are no bathrooms or water available at the project site and none are proposed as part of the project. Therefore, the projects would not require any wastewater treatment facilities and would not include or require any new or expanded water supply facilities. Therefore, the projects would have no impact on wastewater treatment requirements or water supplies.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have no impact on this resource area and will not require additional mitigation. Specifically, the EIR states that:

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

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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 (MCOSD, 2014a, p. 14-22).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any policies or BMPs that address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not exceed wastewater treatment requirements, require new water or wastewater treatment facilities, or affect the wastewater treatment capacity. These trail improvements do not require any wastewater or water supply facilities. The proposed projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR and the projects are consistent with the circumstances described in the RTMP EIR. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts. Further, there is no new information with respect to wastewater or water supply that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

The project site is crossed by ephemeral tributaries of Sutton Manor Creek. These tributaries cross the existing trail in failing culverts that would be replaced as part of the project.

Project Impacts

The projects would not require new or expanded stormwater facilities. One of the purposes of the projects is to fix drainage and erosion issues on the existing trails. The improvements would address water flows across the trails and reduce the concentration of runoff. The new culverts would prevent flooding of the trail. The modified trails would direct stormwater into the adjacent vegetated areas and would not concentrate water or direct it into stormwater drainage facilities.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will not have an impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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

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evaluation of stormwater generation and quality, please refer to Chapter 11, Hydrology and Water Quality, of this RD TPEIR) (MCOSD, 2014a, p. 14-22).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any policies or BMPs that address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would not require the expansion or construction of stormwater drainage facilities. The projects would reduce the amount of concentrated runoff by directing flows into the adjacent vegetated area. The new culverts would prevent flooding of the trails and the project would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The proposal to modify the Bob Middagh and Gas Line Trails is consistent with the circumstances described in the RTMP EIR and the project would not result in new significant or substantially more severe impacts. There is no new information with respect to stormwater facilities that is of substantial importance requiring new analysis or verification.

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?

Existing Resources

Water in the project area is provided by the Marin Municipal Water District (MMWD), which provides drinking water to central and southern Marin County. 75 percent of MMWD water comes from rainfall in the Mount Tamalpais Watershed and MMWD's seven reservoirs. 25 percent is imported from the Sonoma County Water Agency (SCWA). SCWA water originates from rainfall that flows into Lake Sonoma and Lake Mendocino and is released into the Russian River. The Russian River water is blended with MMWD's reservoir water in the distribution system for consumption.

Project Impacts

The proposed trail projects would not create new demands for water supply and would not include or require any drinking fountains, irrigation, or water facilities. During construction, the MCOSD would need some minor amounts of water, which it would bring to the site as needed by truck. If available, the MCOSD would use recycled wastewater. Therefore, the projects would have a less than significant impact on water supplies.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will not have an impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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) (MCOSD, 2014a, p. 14-22)

Applicable Policies and BMPs

The RTMP and its EIR do not identify any policies or BMPs that address this issue.

Conclusion

Similar to that described in the RTMP EIR, the proposed projects would have sufficient water supplies to support their construction and operation. Except for minor amounts of water needed for construction, the projects would not have any water supply needs, and therefore, they would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR. The projects are consistent with the circumstances described in the RTMP EIR and there is no new information with respect to water supply needs that is of substantial importance requiring new analysis or verification.

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

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

Existing Resources

Waste collected from the project site would be taken to the Redwood Landfill, located in Novato. Redwood Landfill is permitted throughput capacity to receive 2,310 tons per day of waste material, has a design capacity of 26,000,000 cy, and is estimated to cease operations in 2024 (Waste Management, 2017; CalRecycle 2017).

Project Impacts

As described in the EIR, the MCOSD has placed trashcans within the preserve to collect pet waste of other debris. The project would not increase the demand for this service. Project construction may generate small amounts of waste, but the volume of this waste would not affect land landfill capacity. In addition, the project would comply with applicable county, state, and federal regulations regarding solid waste disposal. Therefore, this impact would be less than significant.

Relationship to the RTMP

The RTMP EIR concludes that the implementation of the plan will have a no impact on this issue area and will not require additional mitigation. Specifically, the EIR states that:

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 (MCOSD, 2014a, p. 14-23).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any policies or BMPs that address this issue.

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Conclusion

Similar to that described in the RTMP EIR, the proposed projects would have a less than significant impact on landfill capacity and would not conflict with state and federal regulations. The projects would not result in new significant or substantially more severe impacts different from those evaluated in the RTMP EIR and the projects are consistent with the circumstances described in the RTMP EIR. There is no new information with respect to solid waste capacity or regulations that is of substantial importance requiring new analysis or verification.

S. MANDATORY FINDINGS OF SIGNIFICANCE

Environmental Issue Area	EIR Section and Page	Do Proposed Changes in the Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any Changed Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information of Substantial Importance Requiring New Analysis or Verification?	Do Previously Adopted FEIR RTMP Policies and BMPs Address/ Resolve Impacts?
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?	Chapters 6 & 7 Pages 6-1 – 7-20	No	No	No	Yes
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 view in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?	Section 16-1 Page 16-1	No	No	No	NA
c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Chapters, 5.0 & 8.0 – 14.0	No	No	No	Yes

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?

Project Impacts

The purpose of the proposed projects is to improve the environmental conditions of the open space preserve. Consistent with this policy and the EIR's evaluation of biological resources, the projects would reduce overall impacts of these trails on the environmental resources of the Alto Bowl Preserve. They would reduce the ongoing impacts of the existing trails by reducing their running slope and dewater the trails, thereby reducing erosion. Additionally, they avoid impacts to sensitive habitat and species. The MCOSD's Vegetation and Biodiversity Management Plan maps most of the Alto Bowl Preserve as Highly Disturbed and Natural Landscape (the two least sensitive zones identified in the vegetation plan) (MCOSD, 2016). Although the re-aligned Gas Line Trail would cross a small area zoned as "Sustainable Natural System" (the second most sensitive zone identified in the vegetation plan), the effects, as described in the Biological Resources section above, would not be significant. The projects include implementation of all the relevant RTMP policies and BMPs to avoid significant impacts on the natural environment, as described in the Biological Resources section above. The projects also include decommissioning of the no longer necessary sections of the Bob Middagh and Gas Line Trails, an unsanctioned trail that leads from the homes at the end of Fairview Avenue, and a small section of the northern end of the Alto Bowl Trail. These decommissions would restore the abandoned segments to natural conditions and would provide new habitat for any affected species.

Relationship to the RTMP

Under the RTMP, any new projects must reduce the overall impact of the road and trail system on natural resources. Specifically, Policy SW.4 states that:

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 (MCOSD, 2014b, p. 4-14).

As described in Chapter 7 of the RTMP EIR, implementation of the plan will not result in significant impacts to historical or archaeological resources.

Applicable Policies and BMPs

For a complete description of policies and BMPs that the MCOSD would implement as part of these trail-improvement projects, see the Biological and Cultural Resources sections above.

Conclusions

The projects are consistent with the RTMP EIR's assessment of impacts to habitat, fish and wildlife, cultural, and historic resources. Through the implementation of biological and cultural BMPs

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identified in the RTMP, the projects would not affect these resources. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. The proposal to modify the Bob Middagh and Gas Line trails is consistent with the circumstances described in the RTMP EIR, which concludes that the plan would not result in significant impacts to biological or cultural resources. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to habitat, fish and wildlife, cultural, and historic resources that is of substantial importance requiring new analysis or verification.

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.)

Project Impacts

The proposed projects are one of several trail projects that the MCOSD has constructed in the last four years as part of its implementation of the RTMP. These projects include repairs and improvements to the Dawn Falls Trail, Piedmont Trail, Roy’s Redwoods Loop Trail, Cascade Canyon Fire Road, the Old Railroad Grade Trail, Val Vista Trail, Octopus Trail, and Contour/Candelero complex trails. During 2017, the MCOSD proposes to construct improvements and repairs to several roads and trails, including the Gas Line Trail, Bob Middagh Trail (Alto Bowl Preserve), Hunt Camp Trail (Gary Giacomini Preserve), Canyon Trail (Cascade Canyon Preserve), Irving Fire Road (Terra Linda/Sleepy Hollow Divide Preserve), and Alto Bowl Fire Road (Alto Bowl Preserve). The MCOSD is also planning for several road and trail projects for 2018, including Ponte Fire Road (Pacheco Valle Preserve), Haute Lagunitas (Gary Giacomini Preserve), and Fairway Trail (Camino Alto Preserve). Finally, the RTMP created a process by which MCOSD would be implementing trail projects in the future.

All these projects would comply with the requirements of the RTMP, including Policy SW.4, which mandates the designation of new roads and trails resulting in a net reduction of environmental impacts from the existing road and trail system. The projects would achieve this policy goal through reducing erosion and sedimentation, improving the environmental impacts from existing stream crossings, redesigning trails to avoid impacts to sensitive habitat and species, and decommissioning of existing non-system trails. In combination, these projects would result in a net improvement to the resources of the preserves.

In addition to the proposed improvements to the Bob Middagh and Gas Line Trails, the MCOSD is proposing to replace a culvert that crosses the Alto Bowl Fire Road at its intersection with Sausalito Street. This repair project consists of removing the failed culvert and replacing it in-kind. There would be no changes to the alignment or uses of the fire road and would not have a cumulative impact on any of the issues considered in the RTMP EIR.

The proposed trail projects included measures to avoid impacts to special-status species, sensitive habitats, and nesting and breeding animals. These protection measures are BMPs from the RTMP, and include requirements for the following: 1) pre-project nesting bird surveys with buffers around any identified nests; 2) decommissioning existing trails that partially offset any impacts from the realignment of the Gas Line and Bob Middagh Trails; and 3) installation of trail features to reduce erosion and sedimentation. With the RTMP’s BMPs, these projects would have cumulative benefits to the resources of the preserve by improving its road and trail system, as required by the RTMP.

Relationship to the RTMP

The RTMP EIR concludes that the plan will not have significant cumulative impacts on the environment. Specifically, the EIR evaluated the plan for cumulative effects on following issue areas:

- Land Use, Population, and Housing
- Transportation
- Air Quality
- Noise
- Hydrology, Water Quality, and Flood Hazards
- Biological Resources
- Geology
- Agriculture
- Water Supply and Demand
- Public Services
- Hazardous Materials
- Wastewater Management Services
- Solid Waste Management
- Fire Protection and Emergency Services
- Criminal Justice Services
- Public Education Services
- Parks and Recreation Services
- Cultural Resources
- Visual Resources

Applicable Policies and BMPs

For a complete description of policies and BMPs implemented as part of these trail improvement projects, see the issue evaluations above.

Conclusions

The projects are consistent with the RTMP EIR's assessment of cumulative impacts. Through the implementation of the RTMP's policies, BMPs, and design standards, the projects would have a cumulative benefit to the resources of the preserve. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. The proposal to modify the Bob Middagh and Gas Line trails is consistent with the circumstances described in the RTMP EIR, which concludes that the plan will not result in significant cumulative impacts resources. Therefore, there are no changed circumstances resulting in new significant or substantially more severe impacts. There is no new information with respect to cumulative impacts that is of substantial importance requiring new analysis or verification.

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

Project Impacts

The proposed projects would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Their purpose is to improve the environmental conditions of the open space preserve. The proposed projects would improve existing trails to

reduce their impacts on the resources of the preserve. The projects would also improve the recreation experience and accessibility of these trails by reducing steep slopes, improving site lines, and expanding the trail use designation to include bicycles.

Relationship to the RTMP

In its evaluation of impacts, the RTMP EIR concludes that the implementation of the plan will not result in substantial adverse effects on human being.

Applicable Policies and BMPs

For a complete description of policies and BMPs implemented as part of these trail improvement projects, see the issue evaluations above.

Conclusions

The projects are consistent with the RTMP EIR's assessment of adverse effects on human beings. There are no aspects of the proposed trails improvements that result in new or substantially more severe impacts that are different from those evaluated in the RTMP EIR. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. There are no changes to the circumstances to the Alto Bowl Preserve or with adverse effects on human beings resulting in new significant or substantially more severe impacts. There is no new information with respect to adverse effects on human beings that is of substantial importance requiring new analysis or verification.

T. OTHER REQUIRED CEQA ANALYSIS

Growth Inducement and Secondary Effects

Project Impacts

The proposed improvements to the Bob Middagh and Gas Line trails would not result in: (1) construction of new residential units or employment-generating land uses; (2) impacts to existing infrastructure or roads; (3) changes to open space uses; (4) modifications to any general plan land use or zoning designation; or (4) requirements for a substantial number of new workers. Therefore, the projects would not induce substantial growth in Marin County.

Relationship to the RTMP

In chapter 16, section 16-2, on page 16.16, the RTMP EIR assessed the plans potential for growth inducement and secondary effects and concludes that:

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.

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The impact of growth inducement would be less than significant, and no mitigation would be required (MCOSD, 2014a, p. 16.17).

Applicable Policies and BMPs

The RTMP and its EIR do not identify any policies or BMPs that address this issue.

Conclusions

The projects are consistent with the RTMP EIR's assessment of growth inducing impacts. There is no aspect of the proposed trail improvements that would result in new or substantially more severe impacts different from those evaluated in the RTMP EIR. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. There are no changes to the circumstances to the Alto Bowl Preserve or with growth inducing impacts resulting in new significant or substantially more severe impacts. There is no new information with respect to growth inducing impacts that is of substantial importance requiring new analysis or verification.

Energy

Background

CEQA § 21100(b) requires that an EIR discuss and consider mitigation measures for the potential energy impacts of proposed projects, with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines provides guidance for assessing the significance of potential energy impacts. It provides three objectives for achieving the ultimate goal of conserving energy:

1. Decreasing overall per capita energy consumption;
2. Decreasing reliance on natural gas and oil; and
3. Increasing reliance on renewable energy sources.

Existing Resources

Current energy use at the project site is very minimal. Recreational users may use small amounts of gasoline to drive to and from the project site. Similarly, MCOSD rangers and maintenance staff drive to and from the project site and also use petroleum during routine maintenance activities (mowing, weed wacking etc.). There is no electrical use at the project site.

Project Impacts

The proposed improvements to the Bob Middagh and Gas Line Trails would not result in measurable incremental increases in the use of fuel. During construction, the projects would require the use diesel-powered heavy equipment and gas-powered vehicles to access the site and bring materials and equipment to the area. Because of the projects' short duration (eight weeks), only a small amount fuel used for these activities and this consumption would not have a measurable effect on local and regional energy supplies. Implementation of Policy SW-26 would ensure that MCOSD uses the most efficient equipment available and conducts the project in an energy efficient manner.

The projects are not likely to significantly increase vehicle trips for recreational use of these trails. The Gas Line and Bob Middagh trails are existing facilities that primarily support neighborhood

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traffic. The proposed trail improvements are not likely to attract significantly more people to the area. The change in use designation for the Bob Middagh Trail to allow bicyclists may increase use of the trail. Since most of these users would bike to the trail, it is unlikely that the change in use would have an impact on energy supplies. Operation and maintenance activities would be similar to existing conditions and energy use would not increase compared to baseline conditions. Therefore, the projects would have a less than significant impact on energy use.

Relationship to the RTMP

The RTMP EIR Chapter 16, Section 16-3, page 16.17 – 16.18, discusses the impact from the implementation of the RTMP on energy. That section concludes that:

The only type of energy used in activities pursuant to the RTMP would be vehicle and equipment fuels. As defined in the RTMP, construction of roads and trails includes reconstruction, rerouting, active decommissioning, and active road-to-trail conversion. Maintenance activities that could result in energy use include grading, cleaning drainage features, other minor maintenance construction activities, passive decommissioning, and passive road-to-trail conversion. Though ongoing over the life of the RTMP, construction and maintenance would be a continuous, but periodic, process occurring at various locations over time at varying intervals for any particular road or trail segment. These activities would result in fuel use by powered equipment, and from construction and employee vehicles traveling to and from the MCOSD preserves. 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 (MCOSD, 2014a, pp. 16-17 – 16-18).

Applicable Policies and BMPs

Policy SW-26 would ensure that MCOSD uses the most efficient equipment available.

Conclusions

The projects are consistent with the RTMP EIR's assessment of energy impacts. There is no aspect of the proposed trail improvements that would result in new or substantially more severe impacts

that are different from those evaluated in the RTMP EIR. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. There are no changes to the circumstances to the Alto Bowl Preserve or with energy impacts resulting in new significant or substantially more severe impacts. There is no new information with respect to energy impacts that is of substantial importance requiring new analysis or verification.

Significant Unavoidable Environmental Effects

Project Impacts

The proposed improvements to the Gas Line and Bob Middagh trails would not have any significant unavoidable environmental impacts, as identified in this environmental checklist. All potential impacts would be reduced to a less than significant level with implementation of applicable policies and BMPs.

Relationship to the RTMP

The RTMP EIR Chapter 16, section 16.6, page 16-18 concludes that the implementation of the RTMP will not result in significant unavoidable environmental effects.

Applicable Policies and BMPs

The RTMP and its EIR did not identify any mitigations, policies, or BMPs to address this issue area.

Conclusions

The projects are consistent with the RTMP EIR's assessment of significant unavoidable environmental impacts. There is no aspect of the proposed trail improvements that would result in new or substantially more severe impacts that are different from those evaluated in the RTMP EIR. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. There are no changes to the circumstances to the Alto Bowl Preserve or significant unavoidable environmental impacts resulting in new significant or substantially more severe impacts. There is no new information with respect to significant unavoidable environmental impacts that is of substantial importance requiring new analysis or verification.

Significant Irreversible Changes

Project Impacts

The proposed improvements to the Gas Line and Bob Middagh Trails would not result in significant impacts to renewable and non-renewable resources, significant environmental changes, or the potential to cause environmental accidents. Consumption of nonrenewable energy resources is discussed above and the project would have a less than significant impact. Minor amounts of construction materials (e.g., culverts, signage, dirt) would be required for the project and would be readily provided by existing supplies. No other renewable and non-renewable resources would be affected by this project and this impact would be less than significant.

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Relationship to the RTMP

The RTMP EIR Chapter 16, section 16.6, pages 16-18 – 16-20 conclude that the implementation of the RTMP will not result in significant irreversible environmental changes. Specifically, the RTMP EIR states that the plan includes:

1. “Policies, procedures, standards, and BMPs ... to reduce and minimize the impact to renewable and non-renewable resources” (MCOSD, 2014a, p. 16-19).
2. “Policies, procedures, standards, and BMPs ... to fully avoid or reduce the effects of the environmental changes associated with the implementation of the RTMP” (MCOSD, 2014a, p. 16-20).

This section also concludes that “the RTMP proposes no uniquely hazardous uses, and its implementation will not be expected to cause environmental accidents that will affect other areas” (MCOSD, 2014a, p. 16-20).

Applicable Policies and BMPs

The RTMP and its EIR did not identify any mitigations, policies, or BMPs to address this issue area.

Conclusions

The projects are consistent with the RTMP EIR’s assessment of significant irreversible environmental changes. There is no aspect of the proposed trail improvements that would result in new or substantially more severe impacts that are different from those evaluated in the RTMP EIR. Therefore, the proposed projects would not trigger the need for new mitigation measures because of new or more severe impacts. There are no changes to the circumstances to the Alto Bowl Preserve or with significant irreversible environmental changes resulting in new significant or substantially more severe impacts. There is no new information with respect to significant irreversible environmental changes that is of substantial importance requiring new analysis or verification.

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Appendix

Marin County Open Space District's Road and Trail Management Plan Policies and Best Management Practices

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.

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.

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.

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.

TRL-1.1: Protect the Existing Countywide Trail System. Maintain the existing countywide trail system and protect the public's right to access it.

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.

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.

TRL-1.b: Designate Trails Consistent with Agency Missions. Determine public use of trails consistent with each agency's mission and policies.

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.

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.

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TRL-1.g: Evaluate Proposed Development for Trail Impacts. Review development proposals for consistency with the Marin Countywide Trails Plan or local community plans.

TRL-2.1: Preserve the Environment. In locating trails, protect sensitive habitat and natural resources by avoiding those areas.

TRL-2.2: Respect the Rights of Private Landowners. Design and manage trails to avoid trespass and trail construction impacts on adjacent private land.

TRL-2.3: Ensure User Safety. Plan and maintain trails to protect the safety of trail users.

TRL-2.5: Provide Access for Persons with Disabilities. Design and develop trails and trail programs to enhance accessibility by persons with disabilities.

TRL-2.6: Provide Multiple Access Points. Design trails with multiple access points to maximize accessibility and minimize concentrating access.

TRL-2.7: Ensure Sustainable Maintenance. Continue to ensure that trails are responsibly maintained.

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.

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.

TRL-2.b: Design, Build, and Manage Trails in a Sustainable Manner. Incorporate design measures that protect vegetation, protect habitats, and minimize erosion.

TRL-2.c: Eliminate Trail Redundancy. Identify, abandon, and restore redundant or otherwise unnecessary trails or trail segments.

TRL-2.d: Protect Private Property. Design and locate trails to avoid trespassing and adverse impacts on adjacent private lands and sensitive land uses.

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.

TRL-2.f: Acknowledge Historic Trail Users. When acquiring a property for public use, consider trail use that occurred prior to the public acquisition.

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.

TRL-2.h: Identify Access Opportunities for Persons with Disabilities. Review existing access opportunities for persons with disabilities. Identify and pursue new opportunities.

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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.

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.

TRL-2.m: Maintain Trails in a Sustainable Manner. Consider and implement as appropriate.

TRL-2.n: Promote Interagency Cooperation. Encourage information sharing and cooperation among public agencies concerning sustainable trail maintenance.

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.

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.

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.

Policy P3: The MCOSD will encourage open space visitors to walk, bicycle and carpool to open space.

Policy P4: The MCOSD should partner with police and fire departments to enforce lawful parking at entrances to open space.

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.

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.

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.

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.

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.

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.

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Policy T1f: Deleted by the RTMP

Policy T1g: The MCOSD will prohibit the use of motorized vehicles on open space, with authorized exceptions.

Policy T2a: The MCOSD will use best management practices in the design, construction, and maintenance of trails.

Policy T2b: The MCOSD will strive to coordinate trail design and management with the owners and managers of adjoining lands.

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.

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.

RTMP Policies

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.

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.

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.

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.

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Policy SW.5: Policy on Pedestrian Activities. Pedestrians are encouraged to stay on system roads and trails.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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

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displacement of any trail user types, minimize disturbance to existing neighbors, and avoid endangerment of other trail users.

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.

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.

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.

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.

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.

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.

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.

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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.

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.

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.

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.

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.

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.

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.

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.

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

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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.

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.

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.

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.

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.

RTMP Best Management Practices

General-1

Limit Work Area Footprints in Sensitive Resource Areas. Limit the size of construction-related road and trail management activities to the minimum size needed to meet project objectives. BMPs include:

- **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.

General-2

Modify Construction- Related Vegetation Management Methods in and near Wetlands, Riparian Vegetation. 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:

- 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

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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>).
- 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:

- 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:

- 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.
- 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,

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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

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:

- 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. 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.

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.

- 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.
 - 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.
- 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,

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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:

- 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).
- **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.
 - **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

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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.
- Other procedures:
 - 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.

General-8

Control Noise. 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:

- Equipment and vehicles should utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, and use of intake silencers, ducts, engine

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enclosures and acoustically attenuating shields or shrouds, and installation of sound blanket around the project site.

General-9

Conduct Worker Training: 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).

General-10

Road and Trail Inspections: 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: To reduce and control the spread of Sudden Oak Death (SOD) within the MCOSD system, the following practices will be implemented.

The MCOSD staff will educate visitors about preventing the spread of Sudden Oak Death (SOD).

- 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:
 - 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.

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.

- 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

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- 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.

Sensitive Natural Resources–1

Modify Management Practices near Sensitive Natural Resources: 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:

- 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.

Special-Status Wildlife-1

Literature Reviews: 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.

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.

In addition to the MCOSD database, the following resources will be reviewed, as necessary, prior to work:

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- 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

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

Special-Status Wildlife-2

Preconstruction Surveys: 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.

Special-Status Wildlife-3

Seasonal Restrictions During Bird Nesting Season: 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.

- 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.
- 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.

Special-Status Wildlife-4

Avoidance and Protection of Northern Spotted Owl

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:

- 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.

Special-Status Wildlife-5

Avoidance and Protection of Double-Crested Cormorant Nests and Heron and Egret Rookery Sites: 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

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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:

- 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.
- 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

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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.

Special-Status Wildlife-6

Avoidance and Protection of California Clapper Rail, California Black Rail, and Salt Marsh Harvest Mouse:

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:

- 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.

Special-Status Wildlife-7

Protection of Fish Habitats: If crossing a stream with the potential to support fish is part of a road or trail project, proper fish passage will be designed:

- 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.

Special-Status Wildlife-8

Worker Awareness Training: 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.

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: 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: 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: 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.

Special-Status Plants-1

Literature Reviews: 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:

- 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

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. Biological communities will be classified as sensitive or nonsensitive as defined by the California Environmental Quality Act and other applicable laws and regulations.

Special-Status Plants-2

Avoidance and Protection of Special- Status Plant Species near Road and Trail Management Projects: 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:

- 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.
- 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

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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.

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.

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:

- 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:

- 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.

Special-Status Plants-5

Erosion Potential near Special-Status Plants: The MCOSD will seek to prevent erosion near special-status plants. To protect these species, the MCOSD will:

- 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.

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- 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: The MCOSD will prevent the introduction of invasive and other nonnative plant material into special-status plant habitats by implementing the following practices:

- 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: 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:

- 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 over collection 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.

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:

- 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: 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

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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: 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: 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.

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: 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: 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.

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- 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: 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:

- 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: The MCOSD will implement the following procedures when working in or near infested areas:

- 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: To minimize the establishment of invasive species in disturbed soil areas, the MCOSD will implement one or more of the following actions:

- 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

- 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.

Invasive Plant Management-8

Protection of Streambanks and Water Quality During Invasive Plant Removal

- 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: 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: 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.

Construction Contracts -1

Standard Procedures in Construction Contracts: When using contractors to perform road and trail management, the MCOSD will include some or all of the following standard procedures into construction contracts.

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.

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

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management work in or near wetlands, ponds, seeps, creeks, tidal areas, or stream crossings. The following practices will be followed to protect these habitats:

- 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>).

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:

- 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.
- 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.

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

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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.

- 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 over collection 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.

Other procedures:

- Keep all entry gates to the project site locked during non-construction hours, or locked at all times if not needed for construction access.

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- 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-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:

- 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.

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- 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: 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: 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: 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: 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: 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-1

Modifications to Road and Trail Management Actions to Protect Water Bodies, Wetlands, and Tidally Influenced Areas: 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.

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- 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.

Water Quality-2

Temporary Erosion and Sediment Control: 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 post-construction stabilization measures: Information and standard details for temporary erosion-control BMPs can be found in the California Stormwater BMP Handbook – Construction (CASQA 2009).

- 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:
 - tilling (minimum 6 inch depth) and seeding
 - hydromulch and tackifier

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- planting
 - straw or wood mulch
 - coir (jute) netting
 - biodegradable erosion-control blankets
 - plastic sheeting (only as an interim protection during storm events when construction site is still active)
- 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).

Water Quality-3

Erosion Control Measures

- 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.

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.

Water Quality-4

Preventing or Reducing the Potential for Pollution:

- Include spill prevention and clean-up in annual staff training sessions.

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- 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: 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:

- 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

Staff will report any findings and make recommended corrective actions if appropriate.

Water Quality-6

Grading Windows: 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: 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: Avoid resource impacts when disposing of materials. Any excess material related to new construction, maintenance, or decommissioning (including soils,

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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

Sidecasting Construction Material: Avoid sidecasting, or at a minimum contain and remove sidecast 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:

Slope gradient	Distance to watercourse	Sidecast 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

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: 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: 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: 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

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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-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: 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. 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:

- 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: 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:

- 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.

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:

- 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-1

County Noise Ordinance Requirements: 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

- 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.