

# North Coast Rail Trail

## Mitigation Monitoring and Reporting Program

SCH#2017092034

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Regional Transportation Commission**

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# Mitigation Monitoring and Reporting Program

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Public Resources Code Section 21081.6(a)(1) requires that a Lead Agency adopt a Mitigation Monitoring and Reporting Program (MMRP) before approving a project in order to mitigate or avoid significant impacts that have been identified in an Environmental Impact Report (EIR). The purpose of the MMRP is to ensure that the required mitigation measures identified in the EIR are implemented as part of the overall project development process. In addition to ensuring implementation of mitigation measures, the MMRP provides guidance to agency staff and decision-makers during project implementation, and identifies the need for enforcement action before irreversible environmental damage occurs.

This document is the MMRP for the North Coast Rail Trail Project, proposed in the County of Santa Cruz, California. The Proposed Project would be a new multi-use trail to be shared by bicyclists and pedestrians. It would extend approximately 7.5 miles along the rail line from the Wilder Ranch State Park parking lot on the south to the Davenport Beach parking area on the north. The Proposed Project would include a paved path with striping, parallel unpaved path and/or shoulder, fencing, and parking improvements with trail connections at three locations along the alignment. The multi-use trail would be placed on the coastal side of the existing railroad tracks.

Construction of the Proposed Project is estimated to begin in 2021 and would continue for approximately 12 months. If the trail is constructed in phases due to funding constraints, the southern portion from Wilder Ranch to Panther/Yellowbank Beach (5.4 miles) would be constructed first and require approximately eight months. Pending available funds, the northern portion from Panther/Yellowbank Beach to Davenport (2.1 miles) would be constructed subsequently and require approximately four months.

The following table summarizes the mitigation measures for each issue area identified in the Final EIR for the North Coast Rail Trail Project (SCH #2017092034). Specifically, the table identifies each mitigation measure; the action required for the measure to be implemented; the time at which the monitoring is to occur; the monitoring conditions; and the agency or party responsible for ensuring that the monitoring is performed. In addition, the table includes columns for compliance verification.

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Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<b>Aesthetics</b>							
<p><b>MM AES-3. Minimize Artificial Appearance of Coastal Armoring.</b></p> <p>At the eroding coastal bluff near Davenport, armoring to stabilize the base of the slope shall be designed to minimize its artificial appearance. The color and texture of armoring materials shall be visually compatible with the appearance of the surrounding coastal bluff. These design features shall be included in the final plan set prior to the initiation of construction.</p>	Ensure that final plan set includes the required design features.	Prior to start of Project construction.	Once in plan review.	Santa Cruz County Regional Transportation Commission (RTC) and CFL.			
	Ensure that the design features are constructed in accordance with the plans.	Project construction phase.	Once as part of construction inspection.	RTC and CFL.			
<b>Agricultural Resources</b>							
<p><b>MM AG-1. Implement Agricultural Land Conservation Measures (<i>Optional Measure</i>)</b></p> <p>Prior to issuance of any grading permits, the RTC shall provide that for every 1.0 acre of FMMP Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) in the Project corridor that is permanently converted from active agriculture to non-agricultural use as a result of trail development, 1.0 acre of land of comparable agricultural productivity shall be preserved in perpetuity. Said 1:1 mitigation shall be satisfied through one or more of the following:</p> <p>a. Granting a perpetual conservation easement(s), deed restriction(s), or other farmland conservation mechanism(s) to the County or qualifying land management entity,<sup>1</sup> such as the Land Trust of Santa Cruz County, for the purpose of permanently preserving agricultural land. The required easement(s) area or deed restriction(s) shall, therefore, total a minimum of 1.4 acres of FMMP Important Farmland. The land covered by said off-site easement(s) or deed restriction(s) shall be located in Santa Cruz County.</p> <p>b. Making an in-lieu payment to a qualifying entity, such as the Land Trust of Santa Cruz County, to be</p>	Ensure perpetual conservation of agricultural land, as described in the measure.	Prior to issuance of any grading permits.	Once.	RTC and CFL.			

<sup>1</sup> A qualifying entity would be an incorporated land conservancy that has demonstrable ability to purchase, hold, and manage agricultural conservation easements and that possesses accreditation from the Land Trust Alliance.

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<p>applied toward the future purchase of a minimum of 1.4 acres of FMMP Important Farmland in Santa Cruz County, together with an endowment amount as may be required. The payment amount shall be determined by the qualifying entity or a licensed appraiser.</p> <p>c. Making an in-lieu payment to a qualifying entity, such as the Land Trust of Santa Cruz County, to be applied toward a future perpetual conservation easement, deed restriction, or other farmland conservation mechanism to preserve a minimum of 1.4 acres of FMMP Important Farmland in Santa Cruz County. The amount of the payment shall be equal to 110 percent of the amount determined by the qualifying entity or a licensed appraiser.</p> <p>d. Any combination of the above.</p>							
<p><b>MM AG-3(a). Implement Measures to Reduce Construction-Related Conflicts with Agricultural Operations</b></p> <p>The following measures shall be implemented during construction to reduce potential conflicts between construction-related activities and agricultural operations:</p> <ul style="list-style-type: none"> <li>▪ Staging areas shall not be placed in or directly adjacent to active agricultural areas and access to staging areas shall not block or inhibit access to existing farmland or farm access roads</li> <li>▪ Where feasible, construction adjacent to agricultural areas shall not occur during peak harvest periods, typically in the fall months</li> <li>▪ When construction activities must occur during agricultural harvest (for example, to avoid nesting bird season), reasonable access to farmland, as determined by the RTC or the Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFL) in consultation with the North Coast Farmers, shall be maintained; while precise timing cannot be specified, the RTC or CFL would endeavor to consult with the Farmers as</li> </ul>	<p>In the final design plans, include measures to reduce conflicts with agricultural operations, as described in the measure.</p> <p>Implement measures to reduce conflicts with agricultural operations, as described in the measure.</p>	<p>Project design phase.</p> <p>During construction.</p>	<p>Once in plan review.</p> <p>On-going throughout Project construction.</p>	<p>RTC and CFL.</p> <p>RTC and CFL.</p>			



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<p>early as feasible in the development of the construction schedule</p> <ul style="list-style-type: none"> <li>The construction contractor shall designate a contact for construction-related complaints. Contact information shall be provided to agricultural operators adjacent to the rail line, and shall be posted at construction staging areas. The contractor shall respond to complaints in a timely manner</li> </ul> <p>These measures shall be included in final design plans and implemented by the construction contractor. The RTC or its designee shall review plans to confirm inclusion of these measures and conduct spot-check monitoring during construction to ensure compliance.</p>							
<p><b>MM AG-3(b). Install No Trespassing Signs Prior to Operation<sup>2</sup></b></p> <p>Signs clearly indicating “No Trespassing” shall be installed at key locations, to be identified by the RTC or CFL in consultation with the North Coast Farmers. The signs shall specify the legal ramifications for trespassing on adjacent properties. The Trail Manager shall be responsible for ensuring the signs are properly maintained and shall replace signs when they are removed or damaged such that they are no longer legible.</p>	Install and maintain No Trespassing Signs.	Prior to public use of trail.	On-going as part of trail management.	RTC and CFL and/or designated Trail Manager.			
<p><b>MM AG-3(c). Regularly Remove Solid Waste and Litter during Operation</b></p> <p>Once the trail is open for public use, the Trail Manager shall ensure that solid waste is collected from each of the 23 proposed trash receptacles twice-weekly, or more often as needed to ensure that the trash and recycling receptacles located along the trail and in the three parking lots do not overflow. The frequency shall be determined by the Trail Manager and may vary seasonally, with more frequent collection in the summer months when the trail is busy. Trash/recycling receptacles located in the</p>	Collect solid waste from receptacles and collect litter along and near the trail, as specified in the measure.	After opening of trail for public use.	Twice-weekly or as needed as part of trail management.	RTC and/or designated Trail Manager.			

<sup>2</sup> This measure is a modified version of Mitigation Measure AG-3(a) (Notice of Agricultural Activities) from the 2013 Master Plan EIR. The new measure (MM AG-3(b) herein) satisfies the prior measure while providing more project-specific detail.

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<p>parking lots may require more frequent collection than the receptacles along the trail alignment.</p> <p>The Trail Manager shall be responsible as well for collecting litter along the trail. If litter leaves the trail ROW, the Trail Operator shall ensure that the litter in the vicinity of the trail that is reasonably attributed to trail use is removed within a reasonable time frame. Access to agricultural fields for the purpose of litter removal shall be coordinated with on-site agricultural operators, taking into account pesticide/fumigant restrictions and the goal of minimizing soil compaction or direct contact with crops. The Trail Manager shall not enter adjacent agricultural fields without express permission by the agricultural operator. All solid waste and recyclable materials shall be properly disposed.</p> <p>Additionally, the Trail Manager shall identify garbage, feces, and trampling associated with human activity, including homeless/transient encampments, and report such activity to the County Sheriff and State Parks.</p>							
<p><b>MM AG-3(d). Post Notices to Promote Food Safety Prior to Operation</b></p> <p>Prior to the trail opening for public use, the RTC shall post notices of ongoing agricultural activities along the trail alignment, at least every mile, in addition to posting notices at the trail entrances. The location of the notices posted along the trail shall be identified by the RTC in consultation with the North Coast Farmers. The following information shall be added to the notices, at minimum:</p> <ul style="list-style-type: none"> <li>▪ A reminder that dogs and horses are prohibited on the trail, consistent with State Parks regulations.</li> <li>▪ Notice that trail users are required to use restroom facilities in consideration of food hygiene issues on adjacent agricultural lands, and provide the location of the restroom facilities at the Davenport Beach, Panther/Yellowbank Beach, and Wilder Ranch parking lots.</li> </ul>	Post notices as specified in the measure.	Prior to opening the trail for public use.	On-going as part of trail management.	RTC and/or designated Trail Manager.			

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<p><b>MM AG-3(e). Install Agricultural Interpretive Exhibits prior to Operation.</b></p> <p>Prior to the trail opening for public use, the RTC shall install agricultural interpretive exhibits at key locations along the trail to highlight specifically the importance of agriculture in the North Coast area, consistent with MBSST Master Plan Design Guidelines. The signs shall be intended to educate trail users about the history of North Coast agriculture, typical agricultural practices, and other information determined appropriate in consultation with the North Coast Farmers. The displays shall explain that not all materials applied in nearby agricultural fields are pesticides, but rather may be fertilizers or soil amendments. At least five exhibits shall be placed along the trail in proximity to agricultural operations, and shall be installed in coordination and compatible with other interpretative information (e.g., Sanctuary/coastal education signage).</p>	Install and maintain agricultural interpretive exhibits.	Prior to opening the trail for public use.	On-going as part of trail management.	RTC and CFL.			
<p><b>MM AG-4(a). Relocate Farm Utilities Affected by Trail Construction<sup>3</sup></b></p> <p>The RTC shall be responsible for the actual and reasonable costs to disconnect, dismantle, remove, reassemble, and reinstall agricultural utilities and infrastructure (including, but not limited to, irrigation system components, farm access roads, and power supplies) which was installed originally pursuant to legal entitlements to occupy or use the affected land (e.g., leases, contracts, agreements) in or immediately adjacent to the trail ROW. Utilities shall be relocated in a timely manner to avoid service disruptions.</p>	Facilitate and/or pay for relocation of farm utilities, as described in the measure.	Prior to start of Project construction.	As needed throughout construction of the project.	RTC and CFL.			
	Ensure that final Project plans include trail crossings designed as	Project design phase.	Once in plan review.	RTC and CFL.			

<sup>3</sup> This mitigation is a refinement of Mitigation Measure AG-1(a) (Placement of Fencing) from the MBSST 2013 Master Plan EIR. The prior measure required that fencing be placed to allow continued access by farm equipment. The proposed fencing for this segment of the MBSST has been analyzed herein, and a project- and site-specific analysis determined that Mitigation Measure AG-4(a) (Relocate Farm Utilities Affected by Trail Construction) is a more appropriate mitigation to ensure continued access to agricultural areas.

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<b>MM AG-4(b). Design and Maintain Trail Crossings to Accommodate Farm Equipment and Restrict Access<sup>4</sup></b> The Federal Highway Administration Central Federal Lands Highway Division (FHWA CFL) shall design trail crossings to accommodate farm equipment. This shall include the following: <ul style="list-style-type: none"> <li>▪ Crossings shall accommodate farm equipment measuring 19-foot in width, and shall be paved with a surface that can withstand tractor rousers</li> <li>▪ Gates shall be installed at entrances to each crossing to prevent access to farmlands by trail users. The gates shall include lock system to ensure access by agricultural operators, the Trail Manager, State Parks personnel, and emergency first responders</li> </ul> The Trail Manager shall be responsible for clearing excessive soil, mud, and other debris carried onto the trail by farm vehicles, as needed to ensure safe crossing by pedestrians and bicyclists	described in the measure.						
	Maintain trail crossings.	After construction of trail crossings.	On-going during construction phase and as part of trail management.	RTC, CFL and/or designated Trail Manager.			
<b>MM AG-5. Establish Pesticide Spray Notification Procedures and Install Temporary Warning Signage along Trail.</b> The RTC shall establish notification procedures whereby agricultural operators adjacent to the Project alignment notify the Trail Manager at least 24 hours prior to application of pesticides of primary concern within 100 feet of the trail. The Trail Manager shall develop the list of pesticides of primary concern in consultation with the Agricultural Commissioner and shall include on the list those pesticides most likely to impact public health. The Trail Manager shall update the list annually based on PURs, latest state and federal pesticide regulations, and Agricultural Commissioner recommendations. Upon notification, the Trail Manager or their designee shall place temporary signage on the trail in the vicinity of pesticide application. The signs shall be	Develop list of pesticides of primary concern and update list annually, as described in the measure.	Develop list prior to opening the trail for public use.	Update list annually.	RTC and/or designated Trail Manager.			
	Place temporary signage on the trail in the vicinity of application when pesticides of primary concern are used.	Within 24 hours of notification of application of pesticide of primary concern.	On-going as part of trail maintenance.	RTC and/or designated Trail Manager.			

<sup>4</sup> This mitigation is a refinement of Mitigation Measure AG-1(a) (Placement of Fencing) from the MBSST 2013 Master Plan EIR. As with MM AG-4(a), the analysis herein has determined that Mitigation Measure AG-4(b) (Design and Maintain Trail Crossings to Accommodate Farm Equipment and Restrict Access) is a more appropriate mitigation to ensure continued access to agricultural areas.

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placed in a location highly visible to trail users, and shall indicate the type of pesticide being applied, the duration of application activities, the potential health hazards associated with exposure to the pesticide, and that trail users enter at their own risk. The notice shall additionally include the web address to the National Pesticide Information Center ( <a href="http://npic.orst.edu/">http://npic.orst.edu/</a> ).							
<b>Biological Resources</b>							
<p><b>MM BIO-2. Conduct Biological Monitoring for California Red-Legged Frog (CRLF) and Other Sensitive Wildlife Species</b></p> <p>The RTC/CFL and their construction contractor shall conduct construction monitoring for California red-legged frog (CRLF) and other sensitive wildlife species, as specified below.</p> <ul style="list-style-type: none"> <li>▪ Prior to initiation of construction activities, a USFWS- and CDFW-approved biologist shall prepare a construction monitoring plan that identifies all areas to be protected with exclusion fencing on a 1:1500 scale map (or similar scale determined to be practicable), and all areas requiring monitoring by a USFWS- and CDFW-approved biologist or trained construction monitor.</li> <li>▪ Prior to initiation of construction activities, a USFWS- and CDFW-approved biologist shall conduct an environmental training for all construction personnel. The training shall include a description of CRLF and its habitat, and measures to protect CRLF, and other sensitive wildlife species known or with potential to occur in the Project alignments and surroundings (sensitive fish species, potential Santa Cruz black salamander and western pond turtle, sensitive and native nesting bird species, potential roosting bats species, and San Francisco dusky-footed woodrat).</li> <li>▪ Prior to initiation of construction activities, the construction contractor shall install exclusion fencing (solid silt fencing) in specified areas along the project boundaries, 2.0 feet below grade and</li> </ul>	Prepare a construction monitoring plan, conduct environmental training for construction personnel, and install exclusion fencing.	Prior to initiation of construction activities.	Once.	RTC and CFL – qualified biologist.			
	Conduct construction activities during the dry season, as specified in the measure.	During Construction.	On-going throughout Project construction.	RTC and CFL and construction contractor.			
	Conduct biological monitoring of construction activities, as described in the measure.	During construction.	On-going throughout Project construction.	RTC and CFL – qualified biologist.			

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	<p>3.0 feet above grade, with wooden stakes at intervals of not more than 5.0 feet. The fence shall be maintained in working order for the duration of construction activities. The USFWS-approved biologist shall inspect the fence daily and notify the construction foreman when fence maintenance is required. The fence shall allow for wildlife passage across the alignment at intervals to be determined in conjunction with USFWS and CDFW.</p> <ul style="list-style-type: none"> <li>▪ If feasible, construction activities shall take place during the dry season between June 15 and October 15, or until the first rain of the season, especially vegetation removal and work in or near aquatic features, including ditch wetlands. Only minor activities of no more than five days in duration shall be initiated after October 15, and such activities shall only proceed in upland areas and when the 10-day forecast predicts a less than 30% chance of precipitation.</li> <li>▪ The USFWS- and CDFW-approved biologist shall be present on-site, to direct and inspect all ground disturbing activities, (including vegetation removal, grading, and exclusion fence installation and removal and for all construction activities located in or near aquatic breeding and non-breeding habitats including stock ponds, creeks and drainages, riparian habitat, and palustrine and ditch wetland features) for CRLF and amphibians that may be found within vegetation or sediment. Any vegetation removed shall be placed directly into a disposal vehicle. Vegetation shall not be piled on the ground unless later transferred, piece by piece, under the direct supervision of a USFWS- and CDFW-approved biologist.</li> <li>▪ Once these activities have been completed, the approved biologist shall conduct daily morning inspections of the work area prior to daily construction initiation. The biologist shall check underneath any vehicle or heavy equipment that is</li> </ul>						

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<p>planned to be moved within the construction site for CRLF and amphibians.</p> <ul style="list-style-type: none"> <li>▪ The USFWS- and CDFW-approved biologist shall train a designated construction monitor who shall oversee implementation of all protective mitigation measures when the USFWS-approved biologist is not present. This representative shall be trained in the identification of special-status amphibians. This representative shall not have the authority to handle special status species.</li> <li>▪ The UFWS- and CDFW-approved biologist and construction monitor shall have the authority to stop work that may result in the take of a special status species.</li> <li>▪ At the end of each work day, excavations shall be secured with a cover (preferably) or a ramp to prevent wildlife entrapment.</li> <li>▪ All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.</li> <li>▪ USFWS- and CDFW-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic, if present.</li> </ul>							
<p><b>MM BIO-4. Conduct Breeding Bird Survey and Identify Protective Buffers prior to Construction</b></p> <p>The avian breeding season occurs between February 1 and September 15. If feasible, vegetation and tree removal activities shall occur between September 15 and November 1 to avoid impacts to breeding birds and other sensitive biological resources, consistent with the preferred construction windows identified in Mitigation Measure BIO-8(d). If Project activities are initiated during breeding bird season (between February 1 and September 15) or if construction activities lapse for a period of two weeks or more, a qualified wildlife biologist shall conduct avian breeding surveys and identify protective measures prior to initiating and/or resuming construction.</p>	<p>Conduct breeding bird surveys as described in the measure.</p>	<p>Prior to start of construction activities if such activities are initiated during breeding bird season, or if construction activities lapse for a period of two weeks or more.</p>	<p>Once.</p>	<p>RTC and CFL–qualified biologist.</p>			
	<p>If breeding birds are identified, establish buffers appropriate to the observed nesting species, as described in the measure.</p>	<p>Throughout construction upon identification of nesting birds.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL–qualified biologist, in consultation with USFWS and/or CDFW.</p>			

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<p>If the biologist identifies breeding birds utilizing the trail alignment and surrounding area, the biologist, in consultation with USFWS and/or CDFW, shall establish buffers appropriate to the observed nesting species to protect nesting activities from disturbance, based on standard protocols such as those outlined in the Nesting Bird Management Plan (PG&amp;E 2015). Sensitive bird species that are known to nest adjacent to the trail alignments (northern harrier, American peregrine falcon, western snowy plover) shall be given special consideration.</p>							
<p><b>MM BIO-5. Implement Measures to Protect Roosting Bats during Construction</b></p> <p>Bat maternity roosting occurs typically between May 1 and September 1, and winter hibernacula (shelter occupied during the winter by a dormant animal) for many bat species are found between November 1 and February 15. If feasible, the construction contractor shall conduct limbing/tree removal operations between September 15 and November 1 to avoid bat maternity roosts and winter hibernacula, as well as other sensitive biological resources. These dates are consistent with the preferred construction windows identified in Mitigation Measure BIO-1(a).</p> <p>To avoid impacts to resident roosting bats, a qualified biologist shall conduct a pre-construction survey for bats prior to trimming, limbing, or tree removal during all months as follows:</p> <ul style="list-style-type: none"> <li>▪ A qualified biologist shall determine if bats are utilizing the site for roosting. For any trees/snags that could provide roosting space for cavity or foliage-roosting bats, the trees/snags and foliage shall be thoroughly evaluated to determine if bats are present. Visual inspection, trapping, and/or acoustic surveys shall be utilized as initial techniques. If roosting bats are found, the biologist shall develop and implement acceptable passive exclusion methods in coordination with or based on CDFW recommendations. If feasible, exclusion shall take place during the appropriate windows (February 15-May 1 or September 1-October 15)</li> </ul>	<p>Schedule limbing/tree removal activities to avoid impacts to bats, as described in the measure.</p>	<p>Project design phase.</p>	<p>Once during plan review.</p>	<p>RTC and CFL and construction contractor.</p>			
	<p>Conduct pre-construction survey for bats as described in the measure.</p>	<p>Conduct surveys prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL—qualified biologist.</p>			



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<p>to avoid harming bat maternity roosts and/or winter hibernacula (authorization from CDFW is required to evict winter hibernacula for bats).</p> <ul style="list-style-type: none"> <li>▪ If established maternity colonies are found, a minimum 500-foot buffer shall be established around the colony to protect pre-volant young from construction noise until the young can fly; or implement other measures acceptable to CDFW.</li> <li>▪ If a tree is determined not to be an active roost site for cavity-roosting bats, it may be immediately limbed or removed as follows: <ul style="list-style-type: none"> <li>▫ To avoid harming potential foliage roosting bats, limbs shall be lowered, inspected for bats by a bat biologist, and chipped immediately or moved to a dump site. Alternately, limbs may be lowered and left on the ground until the following day, when they can be chipped or moved to a dump site. No logs or tree sections shall be dropped on downed limbs or limb piles that have not been in place since the previous day.</li> <li>▫ If the tree is not limbed or removed within four days of the survey, the survey efforts shall be repeated.</li> </ul> </li> </ul>							
<p><b>MM BIO-6. Implement Dusky-Footed Woodrat Protection Measures During Construction</b></p> <p>Prior to construction, a qualified biologist shall conduct a preconstruction survey for woodrat houses, and clearly flag all houses within the construction impact area and immediate surroundings.</p> <p>The construction contractor shall avoid woodrat houses to the extent feasible by installing a minimum 10-foot (preferably 25-foot) buffer with silt fencing or other material that shall prohibit encroachment. If this buffer and avoidance is not feasible, the qualified biologist shall allow encroachment into the buffer, but preserve microhabitat conditions such as shade, cover and adjacent food sources.</p>	Conduct preconstruction survey for woodrat houses.	Conduct survey prior to construction.	Once.	RTC and CFL-qualified biologist.			
	Install protective fencing for woodrats.	Install fencing prior to construction.	Monitor maintenance of fencing on an on-going basis as part of construction inspections.	RTC and CFL-qualified biologist.			
	If necessary, develop and implement a Woodrat Relocation Plan, as specified in the measure.	Prior to construction.	Span of thirty days after relocation, as described in the measure (if	RTC and CFL-qualified biologist.			

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<p>Additionally, if avoidance is not possible, a qualified biologist shall develop and implement a Woodrat Relocation Plan. The plan shall be developed in consultation with CDFW (and review by CCC and California State Parks) and shall include:</p> <p><b>Step 1. Live Trapping.</b> Trapping efforts shall not take place during low night temperatures (below 40 degrees Fahrenheit), inclement or extreme weather conditions. To reduce affects to vulnerable young during their breeding season, work shall be scheduled between August 1 and October 30.</p> <p><b>Step 2. Dismantling.</b> For occupied houses, the existing woodrat house shall be dismantled and the woody debris, including cached food and nesting material, carried to the nearest suitable relocation site outside the Project footprint and used to build an artificial shelter. If no San Francisco ducky-footed woodrats are captured at a given house, it shall be dismantled by hand to ground level, and the woody debris spread to reduce rebuilding.</p> <p><b>Step 3. Artificial Shelter Location and Installation.</b> Sites for artificial shelters shall be located in proximity to the original house location and no closer than 20 feet from existing woodrat houses and other artificial shelters. Choose the best available microhabitat, ideally in a location with sun and shade and if possible under the same species of tree or shrub as was present at the original house location. Relocation sites shall contain biologically-suitable habitat features (e.g. stands of poison oak, coast live oaks, and dense native brush).</p> <p><b>Step 4. Release of San Francisco Dusky-footed Woodrat.</b> The occupied live-trap shall be placed against the entrance to the artificial shelter, opened, and the woodrat allowed to enter, ideally on its own accord. After the individual enters, the entrance shall be loosely but completely plugged with dirt and leaf duff to encourage it to stay, at least for the short-term.</p> <p><b>Step 5. Monitoring.</b> Monitoring shall be conducted for 30 days after relocation is completed and include</p>			necessary).				

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<p>infrared and motion activated cameras and an occupancy assessment.</p> <p><b>Step 6. Safety Measures.</b> Human exposure to woodrats and possible diseases carried by woodrats shall be minimized.</p> <p><b>Step 5. Reporting.</b> A report on San Francisco dusky-footed woodrat nest monitoring shall be provided to CDFW, CCC, and California State Parks within 30 days following the end of the monitoring period and shall include the methods and results of trapping and relocation, occupancy determinations, and discussion of any remedies that may be needed.</p>							
<p><b>MM BIO-8(a). Minimize Construction in Sensitive Habitats</b></p> <ul style="list-style-type: none"> <li>▪ To the extent feasible, all trail construction activities, including access routes, staging areas, stockpile areas, and equipment maintenance are to be located outside of the limits of mapped sensitive habitats. Sensitive habitat areas shall be mapped by a qualified biologist and clearly shown on construction plans. Temporary fencing (e.g., silt fencing) shall be installed at the outermost edge sensitive habitats and shall not be disturbed except as required for trail construction. Vegetation removal shall be limited to the minimum extent necessary to achieve project objectives. Mature trees will be retained wherever feasible and limbing of trees and shrubs in coastal scrub, arroyo willow scrub and riparian forest, and coast live oak woodland should be favored in lieu of removal. When possible, during construction stumps and burls of native vegetation shall be retained to allow for re-sprouting following project completion.</li> <li>▪ Arroyo willow riparian forest impacted by slope stabilization activities shall be minimized to the maximum extent feasible. Construction of retaining walls, slope contouring, and other stabilization techniques shall be limited to the footprint of the required work area. Silt fencing and other erosion control measures shall be</li> </ul>	<p>Minimize impacts to sensitive habitats from construction activities, as specified in the measure.</p>	<p>During construction.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL-qualified biologist,</p>			

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<p>placed immediately downslope to prevent sediments and debris from entering stream courses and degrading water quality. Bioengineering techniques (e.g. low crib walls, vegetation planting) shall be used as a slope stabilization approach, when feasible.</p> <ul style="list-style-type: none"> <li>▪ Limbing and removal of coast live oak trees located in coast live oak forest habitat shall be minimized to maintain canopy cover, nesting and roosting habitat for bird and bat species, and understory habitat for wildlife, including woodrats and other small mammals.</li> <li>▪ Wherever feasible, RTC and CFL shall implement design options to avoid construction activities in sensitive habitats by electing to construct a narrower trail alignment (16 feet instead of 20 feet), shifting the trail alignment to the adjacent farm road on the coastal side of the trail alignment from south of Davenport to Bonny Doon Beach (identified in Section 2.6, <i>Project Construction</i>), and shifting the trail alignment on the farm road coastward to avoid sensitive habitats.</li> </ul>							
<p><b>MM BIO-8(b). Construct a Boardwalk in Coastal Dune Habitat</b></p> <p>The trail alignment shall include a boardwalk pathway, instead of pavement, where it extends through coastal dune habitat areas, as required by the County of Santa Cruz Sensitive Habitat Ordinance (Santa Cruz County Code 16.32). The boardwalk shall be constructed of untreated natural wood, composite decking, or other approved materials and shall be elevated enough to allow for continual movement of sand and colonization of native plants adjacent to the pathway. Split rail or post and wire fencing shall extend on either side of the boardwalk to prevent intrusion by visitors into the sensitive coastal dunes. Interpretative signs shall educate users to the presence and unique ecological value of coastal dune habitat and direct users to stay on the pathway. Because construction of a boardwalk could result in the direct loss of coastal dune habitat and native</p>	<p>In final Project plans, include a boardwalk pathway, instead of pavement, through coastal dune habitat areas, as specified in the measure.</p> <p>Ensure that boardwalk is built in accordance with plans.</p>	<p>Construction planning phase.</p> <p>Construction phase.</p>	<p>Once in plan review.</p> <p>On-going as part of construction inspections.</p>	<p>RTC and CFL.</p> <p>RTC and CFL.</p>			

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<p>vegetation immediately beneath the pathway, native species including beach bur, American dune grass, and sand verbena shall be planted in nearby degraded coastal dune habitat. Additionally, invasive weeds and non-native vegetation including iceplant, sweet alyssum, and purple ragweed shall be removed from the surrounding area to enhance the existing coastal dune formation. Specific coastal dune enhancement strategies shall be detailed in the Biological Resources MMMP, prepared as part of Mitigation Measure BIO-8(c).</p>							
<p><b>MM BIO-8(c). Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation</b></p> <p>A qualified (USFWS- and CDFW-approved) biologist shall prepare a Project-specific Biological Resources Mitigation and Management Plan (MMP) to compensate for direct and indirect impacts to sensitive habitats, including ESHA, and other sensitive biological resources resulting from trail construction and operation. The MMP shall compensate for permanent loss of sensitive habitats, through the creation, restoration, and enhancement of in-kind sensitive habitat, as close to impacted areas as possible within the study area, or on suitable State Parks lands immediately coastward of the alignment in consultation with State Parks.</p> <p>To protect against the loss of ecological functions and values, compensatory mitigation shall re-create the following features of existing sensitive habitat that would be impacted by the Proposed Project: habitat mosaic, edge habitats, and proximity to wetlands and other waters. A portion of compensatory mitigation shall re-create the linear aspect and provision for wildlife dispersal of existing habitats, where these features are potentially lost as a result of the Proposed Project. This feature shall be designed to protect against fragmentation of remaining habitat patches adjacent to the rail bed.</p>	Prepare MMP as described in the measure.	Prior to Project construction.	Once during plan review.	RTC and CFL – qualified biologist.			
	Implement MMP, as described in the measure.	Project construction phase.	On-going throughout Project construction.	RTC and CFL – qualified biologist.			

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<p>In addition, the Biological Resources MMP shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Description of the trail alignment including acreage of temporary and permanent impacts to coastal scrub, arroyo willow scrub, arroyo willow riparian forest, coast live oak forest, and coastal dune habitats, including the number and type of trees slated for removal.</li> <li>▪ Acreage of temporary and permanent impacts to CRLF breeding and non-breeding aquatic habitat, upland, and dispersal habitat.</li> <li>▪ Ecological functions and values assessment of sensitive habitats, including CRLF habitat to determine suitable mitigation ratios (at a minimum, no-net-loss) in consultation with USFWS, CDFW, and CCC.</li> <li>▪ Goals of compensatory mitigation, including types and areas of sensitive habitat to be created, restored, and/or enhanced; number and type of trees to be replaced, specific functions and values of mitigation habitat types, mitigation ratios (created/restored/enhanced : impacted), and performance criteria, including: <ul style="list-style-type: none"> <li>○ Conservation of functions and values of CRLF critical habitat (including breeding and non-breeding aquatic habitat features, safe movement and dispersal between aquatic features and upland and dispersal habitat that meet the criteria for primary constituent elements for CRLF);</li> <li>○ Conservation of edge habitats;</li> <li>○ Conservation of functions and values for wildlife movement including habitat mosaics, links between creeks and safe passage across the proposed alignment, with perennial water sources, diverse food sources, cover, and shelter.</li> </ul> </li> <li>▪ Such compensatory mitigation must occur as close to impacted areas as feasible and result in no-net-loss (minimum 1:1 replacement ratio) of</li> </ul>							

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>sensitive habitat types, or their functions and values.</p> <ul style="list-style-type: none"> <li>▪ Location and acreage of sensitive habitat, including CRLF habitat, mitigation areas including ownership status, and existing functions and values of restored and/or enhanced sensitive habitats.</li> <li>▪ Detailed sensitive habitat creation and/or restoration construction and planting techniques.</li> <li>▪ Description and design of habitat requirements for sensitive wildlife known to occur in the study area and immediate surroundings (including CRLF, potential Santa Cruz black salamander, western pond turtle, western snowy plover, northern harrier, American peregrine falcon, native nesting bird species, potential roosting bat species, and San Francisco dusky-footed woodrat)</li> <li>▪ Maintenance activities during the monitoring period including replanting native vegetation found within similar habitats within the same watershed and weed removal that avoid take of CRLF and other sensitive wildlife species. Trail maintenance activities would employ hand-tools only. The use of pesticides or herbicides would be prohibited.</li> <li>▪ Strategies to protect remaining sensitive habitats along the trail corridor and surroundings from direct and indirect impacts from trail users and illegal camping, such as: (strategies may include               <ul style="list-style-type: none"> <li>○ split-rail and wire fencing,</li> <li>○ interpretive signage including specific information about sensitive habitats and species and “leave no trace” content, and</li> <li>○ green fencing (dense vegetative buffers consisting of plant species that deter human passage such as poison oak, Pacific blackberry, and stinging nettle), and</li> </ul> </li> </ul>							

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<ul style="list-style-type: none"> <li>○ linear replacement wetlands (see Mitigation Measure BIO-9[b]) of sufficient width (e.g., greater than 6 feet) and depth (e.g., greater than 2.5 feet) to deter crossing.</li> <li>▪ Strategies to protect wildlife movement, both across and along the trail corridor, supported by complex and mature sensitive habitat mosaics, including perennial water sources.</li> <li>▪ Consideration of experience-based management approaches, the science of recreation ecology, and social carrying capacity analysis<sup>5</sup> in the development of this MMP.</li> <li>▪ Long-term quantitative and qualitative monitoring and reporting, including consideration of carrying capacity analysis and alternative approaches, and documenting the ability to meet or surpass performance criteria.</li> <li>▪ Adaptive management strategies to:               <ul style="list-style-type: none"> <li>○ identify shortcomings in meeting performance standards;</li> <li>○ ensure long-term viability of existing, enhanced, restored, and/or newly-created sensitive biological resources;</li> <li>○ enhance ecological functions and values of sensitive habitat mitigation areas, including CRLF habitat and habitat for wildlife movement;</li> <li>○ ascertain the sufficiency of the parking lots, trail access, facilities development and management, and interpretive design features associated with the project to protect biological resources, with</li> </ul> </li> </ul>							

<sup>5</sup> Garrigos Simon, F.J., Y. Narangajavana, and D. Palacios Marques. 2004. Carrying capacity in the tourism industry: a case study of Hengistbury Head. *Tourism Management* 25(2): 275-283; Knight, Richard L., and Kevin J. Gutzwiller, editors. 1995. *Wildlife and recreationists: Coexistence through management and research*. Washington, D.C: Island Pres; Leung, Yu-Fai and Jeffrey L. Marion. 2000. *Recreation Impacts and Management in Wilderness: A State-of-Knowledge Review*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-15-VOL-5. Washington, DC 2000; Manfredo, Michael J., and Richard A. Larson. 1993. Managing for wildlife viewing recreation experiences: an application in Colorado. *Wildlife Society Bulletin* 21:226–236; Manning, Robert E. 2002. “How Much Is Too Much: Carrying Capacity of National Parks and Protected Areas.” *Monitoring and Management of Visitor Flows in Recreational and Protected Areas Conference Proceedings*. A. Amberger, C. Brandenburg, A. Muhar, editors. 2002. 306-313.



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<p>consideration given to adaptive management strategies identified in recreation ecology and social carrying capacity analysis references;<sup>6</sup></p> <ul style="list-style-type: none"> <li>○ if impacts from illegal camping and other off-trail uses result in failure to meet performance standards, adaptive management strategies shall include reducing the hours of operation of the trail and associated facilities (restrooms and parking lots) to be consistent with State Parks hours (open from 8:00 am to sunset).</li> </ul> <p>Mitigation area locations and final replacement ratios (e.g., potentially above the minimum “no-net-loss” ratio set here) shall be determined in consultation with the relevant agencies, as follows.</p> <ul style="list-style-type: none"> <li>▪ <b>U.S. Fish and Wildlife Service (USFWS).</b> California red-legged frog (CRLF)</li> <li>▪ <b>California Department of Fish and Wildlife (CDFW).</b> Sensitive habitats, work below the break in bank of stream corridors, riparian habitat, Fully-Protected species, Species of Special Concern</li> <li>▪ <b>California Coastal Commission (CCC).</b> Environmentally sensitive habitat areas (ESHA)</li> <li>▪ <b>California State Parks.</b> Sensitive resources and habitats on State Park property</li> </ul> <p>The <i>draft</i> MMP shall be submitted to USFWS, NOAA Fisheries, CDFW, CCC, and California State Parks for review prior to formal adoption. Monitoring reports will be provided to these agencies.</p>							
<p><b>MM BIO-8(d). Implement Best Management Practices (BMP) during Construction</b></p> <p>The construction specifications shall include the following BMPs to protect water quality and biological resources during project construction activities.</p>	<p>Include the BMPs listed in the measure in the construction plans.</p>	<p>Project design phase.</p>	<p>Once in plan review.</p>	<p>RTC and CFL.</p>			
	<p>Implement BMPs, as described in the measure.</p>	<p>During construction.</p>	<p>On-going as part of construction</p>	<p>RTC and CFL.</p>			

<sup>6</sup> see Footnote 5 above.

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<ul style="list-style-type: none"> <li>▪ Minimize removal or disturbance of existing vegetation outside of the footprint of project construction activities [refer to <b>Mitigation Measures BIO-8(a) and BIO-9(a)</b>].</li> <li>▪ Limit site access and parking, equipment storage and stationary construction activities to the designated staging areas to the maximum extent feasible.</li> <li>▪ Prior to staging equipment on-site, clean all equipment caked with mud, soils, or debris from off-site sources or previous project sites to avoid introducing or spreading invasive exotic plant species. When feasible, remove invasive exotic plants from the Project area. All equipment used on the premises should be cleaned prior to leaving the site for other projects.</li> <li>▪ Position all stationary equipment such as motors, pumps, generators, and/or compressors over drip pans. At the end of each day, move vehicles and equipment as far away as possible from any water body adjacent to the Project site in a level staging area. Position parked equipment also over drip pans or absorbent material.</li> <li>▪ Check under all equipment for wildlife before use. If any listed or special-status wildlife is observed under equipment or in the work area, do not disturb or handle it. Cease Project activities and contact the biological monitor or resource agencies for further guidance, if the animal continues to be encountered in the Project area.</li> <li>▪ If security fencing is installed around the construction site, allow for passage of wildlife to maintain a link between inland and coastal habitats including stream corridors during construction activities. Prohibit the use of plastic mesh safety fencing to prevent wildlife entrapment.</li> <li>▪ Avoid working at night or during rain events when special-status amphibians and mammals are generally more active. Consult weather forecasts</li> </ul>			inspections.				

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<p>from the National Weather Service at least 72 hours prior to performing work.</p> <ul style="list-style-type: none"> <li>▪ Properly contain and remove all food trash that may attract predators into the work area and construction debris and trash from the work site on a regular basis.</li> <li>▪ Refuel and perform all vehicle and/or equipment maintenance off-site at a facility approved for such activities.</li> <li>▪ To the greatest extent feasible, stabilize all exposed or disturbed areas in the Project area. Install erosion control measures as necessary such as silt fences, jute matting, weed-free straw bales, plywood, straw wattles, and water check bars, and broadcasting weed-free straw wherever silt-laden water has the potential to leave the work site and enter the nearby streams. Prohibit the use of monofilament erosion control matting to prevent wildlife entanglement. Modify, repair, and/or replace erosion control measures as needed.</li> <li>▪ Revegetate with native vegetation found within similar habitats within the same watershed to minimize erosion, prevent the establishment of invasive weeds, and accelerate the recovery of native vegetation communities.</li> <li>▪ Whenever feasible, certain construction activities will be timed to avoid impacts to sensitive habitats and wildlife species, as presented in Table 3.4-5 of the EIR, and at the end of this MMRP. Ideally, most if not all vegetation clearing will be done in the fall.</li> </ul>							
<p><b>MM BIO-9(a). Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats</b></p> <p>Minimize construction related activities including, but not limited to, access routes, staging areas, stockpile areas, and equipment maintenance, within or adjacent to the limits of palustrine emergent wetlands and aquatic/riverine habitats, to the extent feasible. Wetlands and aquatic/riverine areas shall be clearly shown on construction plans. Temporary fencing (e.g., silt fencing) shall be installed at the</p>	<p>In final design plans, include minimization of construction activities adjacent to palustrine emergent wetlands and aquatic/riverine habitats, and installation of temporary protective fencing.</p> <p>Ensure that protections occurred as described in</p>	<p>Prior to construction activities.</p> <p>During construction.</p>	<p>Once in plan review.</p> <p>On-going as part of</p>	<p>RTC and CFL.</p>			

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outermost edge of all features not directly affected by trail construction.	the measure.		construction inspections.				
<b>MM BIO-9(b). Develop and Implement Wetland Mitigation and Monitoring Plan</b> A qualified biologist shall be retained to prepare a Wetland Mitigation and Monitoring Plan (MMP) for all direct and indirect impacts to wetlands and aquatic/riverine habitats resulting from trail construction, resulting in no-net-loss (minimum 1 :1 replacement) of these sensitive habitat types. The mitigation area locations and replacement ratios shall be determined in consultation with the USFWS, NOAA Fisheries, USACE, Central Coast RWQCB, California Coastal Commission, and California Department of Fish and Wildlife. It is expected that mitigation requirements shall be based on the determination by the California Coastal Commission that the trail is a resource-dependent use by providing safe pedestrian and bicycle access to the recreation (e.g., beaches, scenic viewpoints) along the northern Santa Cruz coast and based on its capacity for “nature study” pursuant to Section 30233(a)(7) of the Coastal Act. The Wetland MMP shall include the following: <ul style="list-style-type: none"> <li>▪ Description of the Project including acreage of temporary and permanent impacts to palustrine emergent wetlands, Coastal Act wetlands including arroyo willow scrub and arroyo willow riparian forest, and aquatic/riverine features as identified in a formal delineation of jurisdictional wetlands and other Waters of the U.S.</li> <li>▪ Ecological functions and values assessment of wetlands, including a determination of regulatory status and permitting requirements to determine suitable mitigation ratios</li> <li>▪ Goals of compensatory mitigation project including types and areas of wetland and aquatic/riverine habitat to be created, restored, and/or enhanced; specific functions and values of mitigation habitat types; and mitigation ratios (created/restored/enhanced : impacted)</li> </ul>	Prepare and submit a wetland MMP, as described in the measure.	Prior to Project construction.	Once.	CFL and RTC.			
	Ensure that the MMP is adhered to.	During construction.	On-going as part of construction inspections.	RTC and CFL.			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<ul style="list-style-type: none"> <li>▪ Location and acreage of wetland and riparian mitigation areas including size, ownership status, and existing functions and values of restored and/or enhanced sensitive habitats</li> <li>▪ Detailed wetland and aquatic/riverine construction and planting techniques</li> <li>▪ Description and design of habitat requirements for special-status plants and wildlife, including CRLF, potentially occupying wetland and aquatic/riverine habitats</li> <li>▪ Maintenance activities during the monitoring period, including replanting native wetland and riparian vegetation and weed removal, that will not result in take of CRLF</li> <li>▪ Long-term quantitative and qualitative monitoring and reporting, documenting ability to meet or surpass performance criteria</li> <li>▪ Adaptive management strategies to ensure long-term viability and enhance ecological functions and values of sensitive habitat mitigation areas</li> <li>▪ Strategies to protect remaining wetland and aquatic/riverine habitats along the trail corridor from direct and indirect impacts from trail users. Strategies may include split-rail fencing, interpretive signage, and green fencing (dense vegetative buffers)</li> </ul> <p>The <i>draft</i> MMP shall be submitted to USFWS, CDFW, CCC, and California State Parks for review.</p>							
<p><b>MM BIO-C(a). Include Cumulative Conservation Goals and Objectives in Project-Specific Biological Resources Mitigation and Management Plan (MM BIO-8(c))</b></p> <p>To mitigate for cumulative impacts, the Project-Specific Biological Resources Mitigation and Management Plan (MMP) developed as Mitigation Measure BIO-8(c) shall include specific goals, objectives, and qualitative performance criteria to maintain functional connectivity between habitat patches and open spaces, including the functions and values of the existing linear feature comprised of</p>	<p>Include objectives in the Project-Specific Biological Resources MMP that mitigate cumulative impacts, as listed in the measure.</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL.</p>			
	<p>Ensure that MMP is implemented as described in the measure.</p>	<p>During construction.</p>	<p>On-going as part of construction inspections.</p>	<p>RTC and CFL – qualified biologist.</p>			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>sensitive habitats and wetlands along the rail bed, for movement, dispersal, migration, and genetic exchange of native plants and animals through the conservation of:</p> <ul style="list-style-type: none"> <li>▪ Sensitive habitats and edge habitats;</li> <li>▪ Ecosystems services and water quality associated with wetlands, creeks, drainages, riparian habitat;</li> <li>▪ Wildlife movement habitat, including resources for foraging; hydration; cover, shelter, aestivation/hybernacula; nesting and breeding; movement, dispersal, migration; with special consideration given to the sensitive and breeding species listed above; and</li> <li>▪ Contiguous natural landscapes and connected hunting territories for higher order predators.</li> </ul> <p>The MMP shall consider following strategies:</p> <ul style="list-style-type: none"> <li>▪ Wildlife bypasses; and</li> <li>▪ Interpretive signs with “leave no trace” educational content</li> </ul> <p>The MMP shall include adaptive management strategies specifically addressing cumulative impacts if performance criteria are not met.</p> <p>The MMP shall include an evaluation of (and adaptive management as needed for) the effects of illegal camping, litter (including human foods), urine and fecal matter, and illegal off-leash dogs on biological resources.</p>							
<p><b>MM BIO-C(b). Include Maintenance and Conservation of Biological Resources in the Project Operations &amp; Maintenance Plan</b></p> <p>To mitigate for cumulative impacts, the Project Operations &amp; Maintenance Plan shall provide for the maintenance and conservation of biological resources along the trail alignment by maintaining fencing and vegetative barriers which protect biological resources, install and maintain additional protective fencing around areas determined biologically sensitive by a qualified biologist, and enforce hours of trail use.</p>	<p>Include fencing and vegetative barriers in the Project Operations &amp; Maintenance Plan, as described in the measure.</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL</p>			
	<p>Construct and maintain fencing and vegetative barriers.</p>	<p>During construction.</p>	<p>On-going as part of construction inspections.</p>	<p>RTC and CFL</p>			
<b>Cultural Resources</b>							

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<p><b>MM CR-1(a). Install Historical Interpretive Exhibits Prior to Trail Use</b></p> <p>Consistent with MBSST Master Plan Design Guidelines, RTC shall develop an on-site interpretive exhibit with materials concerning the history and engineering features of the former Davenport Branch Line and its character-defining features. The exhibits shall be installed at key locations along the trail to specifically highlight the importance of the Davenport Branch Line (such as the Davenport Beach and Panther/Yellowbank Beach parking lots), including its earthen embankments and association with the Santa Cruz Portland Cement Company. Interpretation of the site’s history shall be supervised by an architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards, and may engage additional consultants to develop the display. There shall be at least five exhibits, including signage and salvaged materials, such as small segments of original ballast, ties, and rail, to be placed intermittently along the trail route as approved by the lead agency. The historical interpretive exhibits shall be designed in conjunction and compatible with interpretive exhibits for nature education.</p>	<p>Develop interpretive exhibits along the trail, as specified in the measure.</p>	<p>Install exhibits during construction.</p>	<p>Maintain exhibits on an on-going basis as part of trail management.</p>	<p>RTC and CFL</p>			
<p><b>MM CR-2(a). Archaeological Capping at the existing Prehistoric Archaeological Sites prior to Project Construction</b></p> <p>Each site within the footprint of the Proposed Project (CA-SCR-10, CA-SCR-56, and CA-SCR-58) shall be capped with a geotextile and a layer of sterile fill material. A minimum of 12 inches of fill material shall be placed between any Project ground disturbance and the surface of the archaeological site (e.g., if the maximum depth of ground disturbance at a given location is 3 feet, 4 feet of fill must be placed over the site at that location). Capping shall extend a minimum of 3 feet from the edge of Project ground disturbance but may extend further if required by the nature of Project activities at a given location. Archaeological site areas shall be marked with signage indicating that</p>	<p>Conduct geotextile and sterile fill capping at archaeologically sensitive sites, and install fencing and signage, as specified in the measure.</p>	<p>Conduct capping and install fencing concurrent with ground disturbing activities.</p>	<p>Maintain fencing on an on-going basis as part of trail management.</p>	<p>RTC and CFL and/or designated Trail Manager (may include State Parks).</p>			

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the locations are environmentally sensitive areas. Signage at these locations shall not indicate the presence of archaeological sites. Fencing shall be installed along either side of the trail to discourage off-trail activity in these locations. For resources on State Parks property, archaeological capping shall be completed in consultation with State Parks.							
<b>MM CR-2(b). Conduct Archaeological Monitoring during Construction<sup>7</sup></b>	Conduct orientation meeting with construction personnel regarding archaeological monitoring.	Prior to Project construction.	Once.	RTC and CFL			
Prior to the commencement of construction activities, an orientation meeting shall be conducted by an archaeologist with the general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of cultural materials may be encountered, and directions on the steps that shall be taken if such a find is encountered. Topics to be discussed shall include, but not be limited to, Ohlone material culture and a brief history of the Town of Davenport and Wilder Ranch.  During construction, a qualified archaeologist shall be present during all earth moving activities involving excavation within native soils. Archaeological Monitoring may be reduced or halted at the discretion of the monitors as warranted by conditions such as sediments being excavated are fill, negative findings during the first 60 percent of rough grading, or encountering bedrock. If monitoring is reduced to spot-checking, spot-checking shall occur at regular intervals as determined by the qualified archaeologist or when ground disturbance will extend to depths not previously reached. Archaeological monitoring shall not be reduced on or within 50 feet of known archaeological sites. If previously unknown or undiscovered prehistoric or archaeological resources are encountered during ground-disturbing construction activities, the archaeological monitor shall have the authority or the construction	Conduct archaeological monitoring of earth-moving activities.	During construction.	On-going throughout Project construction.	RTC and CFL-qualified archaeologist.			

<sup>7</sup> This mitigation is a refinement of Mitigation Measure CR-2(a) from the 2013 Master Plan EIR.



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<p>contractor shall stop work, and the RTC and State Parks, if appropriate, shall be notified at once to assess the nature, extent, and potential significance of any prehistoric or archaeological cultural remains. The RTC and/or State Parks shall implement a Phase II subsurface testing program to determine the resource boundaries in the trail corridor/impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts.</p> <p>If the site is determined to be significant, the RTC shall cap the resource area, using culturally sterile and chemically neutral fill material, and shall include open space preservation and environmentally sensitive area signage for the site to ensure its protection from development. A qualified archaeologist shall be retained to monitor the placement of fill upon the site and to make open space preservation and interpretive recommendations. If the site is determined insignificant, no capping and or further archaeological investigation shall be required. Where monitoring will occur on State Parks property, each step of this mitigation measure shall be conducted in consultation with State Parks.</p>							
<p><b>MM CR-3. Conduct Paleontological Monitoring during Construction</b></p> <p>Prior to the commencement of ground disturbing activities, a qualified professional paleontologist shall be retained to prepare and implement a Paleontological Resources Mitigation Plan (PRMP) for the Project. A Qualified Paleontologist is defined as an individual who meets the education and professional experience standards as set forth by the SVP (2010), which includes a BS or BA degree in geology or paleontology, one year of monitoring experience, and knowledge of the local paleontology and collection/salvation paleontological procedures and techniques. The PRMP shall describe paleontological monitoring procedures to be used during construction; communication protocols to be followed if a fossil discovery is made during project</p>	<p>Prepare and implement a PRMP.</p>	<p>Prior to ground disturbing activities.</p>	<p>Once.</p>	<p>RTC and CFL – qualified paleontologist.</p>			
	<p>Conduct a WEAP for construction personnel.</p>	<p>Prior to ground disturbing activities.</p>	<p>Once.</p>	<p>RTC and CFL – qualified paleontologist.</p>			
	<p>Conduct paleontological monitoring of earth-moving activities, as specified in the measure.</p>	<p>During construction.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL – qualified paleontologist.</p>			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>development; mitigation recommendations in detail, including and preparation, curation, and final reporting requirements, as described below.</p> <p>Once the PRMP has been prepared and prior to the start of construction, the Qualified Paleontologist or his or her designee, shall conduct Worker Education Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. The WEAP shall be fulfilled at the time of a preconstruction meeting.</p> <p>During construction, a qualified paleontological monitor shall be present during earth moving activities (e.g., excavation, trenching, drilling) which are 1) wider than three (3) feet; 2) deeper than the typical two (2) feet (at the locations listed in <b>Table 2-2</b>, Construction Estimates, in Section 2.6, <i>Project Construction</i>, of this EIR), and in previously undisturbed Santa Cruz Mudstone and Pleistocene marine terrace deposits (as shown in <b>Figure 3.5-1a</b> and <b>Figure 3.5-1b</b>). Monitoring is not required for the entire length of the trail. The duration and timing of the monitoring shall be determined by the Qualified Paleontologist and the location and extent of proposed ground disturbance. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, the Qualified Paleontologist may recommend that monitoring be reduced to periodic spot-checking or cease entirely. In the event a fossil is discovered by construction personnel or the paleontological monitor anywhere in the Project area, all work in the immediate vicinity of the find shall cease and the Qualified Paleontologist shall evaluate the find before re-starting work in the area. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammals) require more extensive excavation and longer salvage</p>							

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Shortly after halting construction in the immediate vicinity of the find, the paleontologist shall notify the RTC, which shall then have the authority to determine how long to maintain the suspension of construction in the immediate vicinity of the find. Before allowing the recommencement of construction, the RTC shall allow the paleontologist or his or her designee sufficient time to safely remove a representative sample of significant fossils from the find.</p> <p>Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection (such as the UCMP), or with State Parks if identified on State Parks property, along with all pertinent field notes, photos, data, and maps.</p> <p>At the conclusion of monitoring and laboratory work and museum curation (if required and conducted), a final report shall be prepared describing the results of the paleontological mitigation monitoring efforts associated with the Project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The final report shall be submitted to RTC and California State Parks, even if paleontological resources are not discovered during monitoring. If fossils were discovered during construction, then a copy of the report shall also be submitted to the designated museum repository.</p>							
<p><b>MM CR-4. Stop Work if Unanticipated Discovery of Human Remains</b></p> <p>During construction, the construction personnel shall stop work if human remains (i.e., bones) are inadvertently discovered during ground-disturbing activities. Consistent with California Health and Safety</p>	<p>Follow protocol for discovery of human remains, as described in the measure.</p>	<p>During construction.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL and construction personnel.</p>			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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Code Section 7050.5, if human remains are found, no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the Santa Cruz County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner is required to notify the NAHC, a representative of which would determine and notify a most likely descendant (MLD). The MLD must complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If human remains are found on State Parks Lands, they shall be treated in accordance with State Parks policies with involvement from the State Parks District Tribal Liaison.							
<b>Geology and Soils</b>							
<b>MM GEO-2. Conduct Design-level Geotechnical Investigation and Implement Recommendations<sup>8</sup></b> Prior to commencement of construction activities, a registered civil or geotechnical engineer shall prepare for review by the RTC a Design-level Geotechnical Investigation for the selected trail alignment. The Design-level Geotechnical Investigation will include a more detailed analysis of geologic and soil conditions along the trail alignment, which at a minimum shall include the following: Additional soil test borings necessary to fully characterize geologic and soil conditions in the trail alignment, including but not limited to soil sampling at critical structure locations (such as retaining walls and reinforced soil slopes) and parking lots Specific and detailed recommendations for structural setbacks, foundation types and the related criteria to be used in their design, allowable settlement, seismic	Prepare a Geotechnical Investigation for the trail, as described in the measure.	Prior to construction.	Once.	RTC and CFL – registered civil or geotechnical engineer.			
	Implement recommendations from the Geotechnical Investigation.	During construction.	On-going throughout Project construction.	RTC and CFL.			

<sup>8</sup> This is a refinement of Mitigation Measures GEO-3, GEO-4, and GEO-7 from the MBSST Network 2013 Master Plan EIR. The prior mitigation has been combined into one measure, and updated to reflect site- and Project-specific information from the Geotechnical Study and Peer Review prepared for the Project.

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>design considerations including seismically-induced settlement, retaining structures as needed, drainage improvements, and earthwork preparation</p> <p>Quantitative analysis of potentially liquefiable sediments in the trail alignment, including estimates of potential settlement, to assess their potential impact on foundations, slope stability, and lateral spreading potential</p> <p>Detailed geotechnical analysis and design standards for reinforced soil slopes, retaining walls, and other Project facilities on or near loose to very loose granular soils, including an assessment of the potential for static and seismically-induced settlement, soil preparation and compaction requirements, and foundation requirements</p> <p>Assessment of compaction needs for existing subgrades below buildings, site walls, and pavement sections to reduce settlement potential</p> <p>Geotechnical design criteria for engineered embankments or retaining walls, including lateral earth pressure values, foundation recommendations, bearing capacity, keyway dimensions and construction recommendations, appropriate slope gradients, slope setbacks, drainage requirements, and specifications and compaction requirements for engineered fill and geosynthetic reinforcement</p> <p>Detailed design recommendations for stabilization of coastal bluffs, including types of materials to be used, foundation requirements and structural connections to competent native materials, and measures to address undercutting of the bluff by wave action</p> <p>Drainage design recommendations to prevent discharge of stormwater unto unprotected slopes and minimize the potential for runoff to cause erosion or destabilize hillslopes (this issue may be addressed by the Design-level Drainage Analysis required by Mitigation Measure HYD-1(d), in which case design recommendations shall be coordinated between the two analyses)</p> <p>Assessment of the potential for Project facilities to be damaged by strong seismic ground shaking and design</p>							

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>recommendations in accordance with the requirements of the CBSC to minimize the potential for structural damage</p> <p>Additional geotechnical design recommendations as required for site preparation, grading and compaction, structure foundation design, retaining walls, slope setbacks, surface drainage, concrete slabs-on-grade, and design of structural pavement sections</p>							
<b>Greenhouse Gas Emissions/Climate Change</b>							
<p><b>MM GHG-1. Install Electric Vehicle Infrastructure in Parking Lots</b></p> <p>The RTC shall install electric vehicle infrastructure that includes an EV charging station at the Davenport parking lot, at a minimum. Due to limits on electrical infrastructure, a charging station connected to the electric grid may only be provided at the Davenport parking lot. EV charging stations will be installed at other Project parking lots proposed for improvement where installation is feasible and funding is available. Solar charging stations shall be considered for the Panther/Yellowbank Beach and Bonny Doon parking lots. The RTC shall request permission to install an EV charging station at the Wilder Ranch State Park parking lot. Parking spots associated with EV charging stations shall include signage to reserve spots for EVs only.</p>	<p>Install electric vehicle infrastructure, as specified in the measure.</p>	<p>During construction.</p>	<p>Once.</p>	<p>RTC and CFL.</p>			
<b>Hazards and Hazardous Materials</b>							
<p><b>MM HAZ-3. Identify and Verify Locations of Utility Infrastructure<sup>9</sup></b></p> <p>Prior to construction, the RTC shall determine the presence and exact location of any underground utility lines that correspond to the trail alignment or could be affected by trail or parking lot construction. In addition, the presence of any above-ground utility lines in close proximity to the trail alignment and parking lots shall be determined. If any utility lines are found to be in proximity to the Proposed Project, the</p>	<p>Identify and verify location of underground utility lines and coordinate with the utility line operator, as necessary.</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL</p>			
	<p>Include specifications in the construction contract that require updates on excavation near utilities, as described in the</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL</p>			

<sup>9</sup> This measure is a refined version of Mitigation Measure HAZ-5(a) (Utility Line Location and Consultation) from the 2013 Master Plan EIR.

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>RTC shall contact the utility line operator about any regulations for grading and construction activities near the lines. Information concerning the size, color, and location of existing utilities must be confirmed before construction activities begin.</p> <p>The construction contract specifications shall require that the contractor provide updates on planned excavation for the upcoming week and identify when construction will occur near a high-priority utility. On days when this work will occur, construction managers shall attend tailgate meetings with contractor staff to review all measures – those identified in the Mitigation Monitoring and Reporting Program and in the construction specifications – regarding these excavations. The contractor’s designated health and safety officer shall specify a safe distance to work near high-pressure gas lines. Excavation closer to the pipeline shall not be authorized until the designated health and safety officer confirms and documents the following in the construction records:</p> <p>The line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device</p> <p>The location was verified by hand by the construction contractor</p> <p>The designated health and safety officer shall provide written confirmation to the RTC that the line has been adequately located and can be feasibly avoided, and excavation shall not start until this confirmation has been received by the RTC.</p> <p>If utility relocation is required, the RTC shall coordinate with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to nearby communities, as required by California Water Code §11590. The RTC shall notify the public in advance of any relocation that is anticipated to disrupt utility service. The RTC shall contact utility owners if construction causes any damage and promptly</p>	measure.						

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Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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reconnect disconnected cables and lines with approval of the owners.							
<p><b>MM HAZ-4(a). Conduct Soil Sampling and Implement Necessary Remediation<sup>10</sup></b></p> <p>Prior to construction, the RTC shall prepare and submit Work Plan(s) for a Supplemental Soils Investigation to County of Santa Cruz Environmental Health. Following notification that County of Santa Cruz Environmental Health has received, reviewed, and accepted these Work Plan(s), the RTC shall conduct a Supplemental Soils Investigation, which shall include soil sampling at selected locations within the limits of the Project corridor under the supervision of a professional geologist or professional civil engineer to identify the concentrations of anticipated contaminants which may include: pesticides, herbicides, TPHs, heavy metals, PAHs, and other reasonably anticipated contaminants of concern.</p> <p>The RTC shall coordinate with County of Santa Cruz Environmental Health Division to develop and implement a program to remediate or manage known contaminated soil during construction. If necessary, any additional information gathered from the Supplemental Soil Investigation shall be used to identify locations along the corridor that may require remedial action in order to prevent exposure of construction workers, maintenance personnel, and trail users to these contaminants. The environmental data collected shall also be used to identify the appropriate disposal options for those soils or demolished materials that require off-site disposal. Disposal shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. Where possible, potentially contaminated soils and rail ballast shall be stockpiled and characterized to determine the appropriate</p>	Prepare, submit, and implement a Work Plan for a Supplemental Soils Investigation.	Prepare and submit Work Plan prior to Project construction.	Implement Work Plan on an on-going basis throughout Project construction.	RTC and County of Santa Cruz Environmental Health Division.			
	Develop a program to manage contaminated soil, as described in the measure.	Prior to Project construction.	Once.	RTC and County of Santa Cruz Environmental Health Division.			
	Implement program to manage contaminated soil, as described in the measure.	Implement program during construction.	On-going throughout Project construction.	RTC and County of Santa Cruz Environmental Health Division.			

<sup>10</sup> This is Mitigation Measure HAZ-1(a) (Soil Sampling and Remediation) from the 2013 Master Plan EIR, refined to account for project-specific conditions



Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
means and location for proper disposal. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health Services. RTC shall submit any required correspondence to County of Santa Cruz Environmental Health Division prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed in accordance with applicable DTSC and CalOSHA regulations. Upon completion of the Supplemental Site Investigation, the environmental consultant shall prepare a report presenting the findings of the additional assessment. The report shall include figures depicting the boring locations, summary tables of analytical data, conclusions, and recommendations.							
<b>MM HAZ-4(b). Prepare and Implement Soils Management Plan<sup>11</sup></b>	Develop an SMP, as described in the measure.	Prior to Project construction.	Once.	RTC and CFL – qualified engineer.			
The RTC shall ensure a Soils Management Plan (SMP) is developed by a qualified engineer and implemented in order to protect workers during ground-disturbing activities and to remove and/or mitigate exposure to hazardous-material-containing soil and ballast, where present in the trail corridor. Laboratory data for the impacted soil, identified as part of the soils and ballast assessment report prepared under Mitigation Measure HAZ-4(a), shall be used to profile excavated soil prior to transport, treatment, and recycling at a licensed treatment facility. Additional profiling of the export soils shall be performed as needed to satisfy requirements of the receiving facility. Removal, transportation, and disposal of impacted soil shall be performed in accordance with applicable DTSC and CalOSHA laws, regulations, and ordinances. The SMP shall include health and safety information for workers and the general public with an emphasis on potential adverse health effects and how to seek proper help if an accident is suspected, and inform the various contractors and workers of the presence of shallow	Implement the SMP, as described in the measure.	During construction.	On-going throughout Project construction.	CFL – qualified engineer, and construction contractor.			

<sup>11</sup> This is a modified version of Mitigation Measure HAZ-1(b) (Arsenic Management Plan) from the 2013 Master Plan EIR that includes arsenic-containing soils management as well as other potential contaminants.

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<p>soil impacted with contaminants and the appropriate measures to avoid exposure to contaminants. These measures may include, but would not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1. Install temporary security fencing around the construction site and flag/cone off the areas of contaminated soils (Hot Spots) until the contaminants are removed</li> <li>2. Providing all personnel entering a Hot Spot with site-specific awareness training</li> <li>3. Requiring that all personnel whose work will involve the excavation or disturbance of soils in and around the Hot Spot must have successfully completed a 40-hour Hazardous Worker (HAZWOPER) training</li> <li>4. Requiring a HAZWOPER supervisor to be on-site at all times during the excavation or disturbance of soils in a Hot Spot</li> <li>5. Prohibiting personnel who cannot prove that they are authorized to enter a Hot Spot or do not have the appropriate personal protective equipment from entering a Hot Spot</li> <li>6. Prohibiting eating, drinking, smoking, chewing gum or tobacco in Hot spots, and requiring consumable items and activities be confined to designated worker break areas.</li> </ol> <p>In the event that contaminated soil and/or groundwater are identified where not previously anticipated during construction, the SMP shall also require that construction cease and that appropriate handling and disposal procedures be implemented. Contaminated soils and/or groundwater can be identified by discoloration or stains, distinctive odors, absence of plants and animals, subsequent erosion from the absence of plant life, or the presence of paint chips or other materials known to contaminate soils. Procedures for properly handling, storing, and disposing contaminated soils may include, but are not limited to, the following:</p> <ol style="list-style-type: none"> <li>1. Placing contaminated soils in properly labeled drums or lined hazardous waste</li> </ol>							

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p>storage/transportation conveyance un its (i.e., roll-off waste boxes) in preparation of transportation and disposal</p> <p>2. Avoiding temporary stockpiling of contaminated soils or hazardous materials</p> <p>3. If temporary stockpiling is necessary:</p> <p>a) Covering the stockpile with plastic sheeting or tarps</p> <p>b) Installing a berm around the stockpile to prevent runoff from leaving the area</p> <p>c) Avoiding stockpiling in or near storm drains or watercourses</p> <p>4. Monitoring the air quality during excavation operations at locations potentially exhibiting elevated concentrations of hazardous material</p> <p>5. Collecting water from decontamination procedures and treating and/or disposing of it at an appropriate disposal site</p> <p>6. Collecting non-reusable protective equipment and disposing at an appropriate disposal site</p>							
<b>Hydrology and Water Quality</b>							
<p><b>MM HWQ-1(a). Prepare Accidental Spill Control Plan and Conduct Environmental Training prior to Construction</b></p> <p>Prior to commencement of construction activities, the RTC or its contractor shall prepare a Spill Response Plan (SRP) and Spill Prevention, Control and Countermeasure Plan (SPCC) for the Project, which shall apply to the construction phase. These plans shall include procedures for quick and safe clean-up of accidental spills. The SRP and/or SPCC shall prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and shall include an emergency response program to ensure quick and safe clean-up of accidental spills and proper disposal of contaminants. Additionally, the contractor shall conduct environmental training program to communicate the risk for accidental spills, environmental concerns and appropriate work</p>	<p>Prepare an SRP and an SPCC and conduct environmental training for field personnel.</p>	<p>Prepare SRP and SPCC and conduct training prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL</p>			
	<p>Ensure that copies of the SRP and SPCC are kept at staging areas and are adhered to.</p>	<p>During construction.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL</p>			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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practices, including spill prevention and response measures to all field personnel prior to construction. A construction inspector or monitor shall ensure a copy of these plans are kept at construction staging areas or other location accessible and frequented by the construction crew, and shall ensure that the plans are followed during all construction activities.							
<b>MM HWQ-1(b). Maintain Vehicles and Equipment during Construction</b> All construction vehicles and equipment, including all hydraulic hoses, shall be maintained in good working order to minimize leaks that could escape the vehicle or contact the ground. A vehicle and equipment maintenance log shall be maintained and updated on a monthly basis for the duration of Project construction. A construction inspector or monitor shall check the vehicles and equipment and ensure the logs are maintained.	Maintain construction vehicles and equipment in working order and keep an equipment maintenance log.	During construction.	On-going throughout Project construction.	RTC and CFL			

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p><b>MM HWQ-1(c). Conduct Design-level Drainage Analysis prior to Construction, and Implement Identified Measures to Minimize Runoff During Construction</b></p> <p>Prior to commencement of construction activities, the RTC shall ensure a registered professional engineer conducts a design-level drainage analysis that identifies existing drainage patterns across the Project corridor, existing off-site stormwater discharge locations, and stormwater control measures to implement during construction of the project. Where feasible, the drainage analysis shall quantify the existing and predicted post-construction peak runoff rates and amounts, both on-site and off-site immediately downgradient of the Project corridor. The drainage analysis shall identify any changes to the location of down-gradient discharge of stormwater runoff and any potential impacts to off-site property that would result from those changes. The stormwater control measures to be implemented during construction shall include or be consistent with measures identified to satisfy the erosion and runoff control standards of the NPDES-required SWPPP. The identified stormwater control measures shall be installed when appropriate during the construction process, including during grading, initial site preparation, excavation, and construction as necessary to control stormwater runoff and erosion during all phases of the construction process.</p>	<p>Conduct drainage analysis, as described in the measure.</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL – qualified engineer.</p>			
	<p>Implement drainage measures identified by the drainage analysis.</p>	<p>During construction.</p>	<p>On-going throughout Project construction.</p>	<p>RTC and CFL – qualified engineer.</p>			
<p><b>MM HWQ-1(d). Prepare Stormwater Control Plan prior to Construction and Implement Identified Stormwater Control Measures</b></p> <p>Prior to commencement of construction activities, the RTC shall prepare a Stormwater Control Plan, prepared by a registered professional engineer, addressing the post-construction stormwater best management practices to be implemented along the Project corridor. The plan shall include the location of the stormwater control measures and details regarding their size and materials. Stormwater control measures shall be developed to maximize on-site</p>	<p>Prepare a Stormwater Control Plan, as described in the measure.</p>	<p>Prior to Project construction.</p>	<p>Once.</p>	<p>RTC and CFL – qualified engineer.</p>			
	<p>Implement stormwater control measures identified in the Stormwater Control Plan.</p>	<p>Implement stormwater control measures during construction.</p>	<p>Maintain stormwater control measures on an on-going throughout Project construction and after</p>	<p>RTC and CFL – qualified engineer.</p>			

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<p>infiltration of stormwater and minimize off-site stormwater discharge during operation of the Proposed Project. Examples of stormwater control measures include additional or expanded above-ground retention and/or detention basins, subsurface infiltration devices such as perforated pipes, permeable pavement, and vegetated swales. The Stormwater Control Plan shall be reviewed by a licensed Geotechnical Engineer to ensure conformance with the Design-level Geotechnical Study for the Proposed Project required by Mitigation Measure GEO-1. The plan shall be prepared by a registered Professional Engineer and include, at a minimum, the following:</p> <ul style="list-style-type: none"> <li>▪ A site map identifying all structural Stormwater Control Measures requiring O&amp;M practices to function as designed</li> <li>▪ O&amp;M procedures for each structural Stormwater Control Measure including, but not limited to, bioswales, retention/detention basins, and culverts</li> <li>▪ Short- and long-term maintenance requirements, frequency of maintenance recommendations, and cost for maintenance estimations</li> </ul> <p>All recommended annual maintenance shall be completed by October 15 of each year of Project operation. The frequency of maintenance activities not required on an annual basis shall be specified in the Stormwater Control Plan.</p> <p>The Stormwater Control Plan shall demonstrate that with implementation and proper maintenance of the proposed stormwater control measures all NPDES post-construction stormwater requirements would be met.</p>			<p>construction as part of trail management.</p>				

Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<b>Noise</b>							
<p><b>MM N-2(a). Provide Notification of Construction Vibration</b></p> <p>The construction contractor shall provide written notification at least three weeks prior to the start of any construction activities involving use of vibratory equipment (e.g., asphalt construction and unpaved should construction) to all residential units located within 50 feet of the construction area that will produce the vibration. The notice shall inform residents of the estimated start date and duration of daytime vibration-generating construction activities</p>	Provide written notification of construction vibration to nearby residents.	Three weeks prior to the start of construction activities involving use of vibratory equipment.	As needed throughout construction phase.	RTC and CFL			
<p><b>MM N-2(b). Limit Construction to Daytime Hours<sup>12</sup></b></p> <p>The construction contractor shall limit construction activities within 150 feet of a sensitive receptor (e.g., residence) to between the hours of 8:00 a.m. to 7:00 p.m. on weekdays and 9:00 a.m. to 4:00 p.m. on Saturday or Sunday.</p>	Limit construction to daytime hours, as specified in the measure.	During construction.	On-going throughout Project construction.	RTC and CFL and construction contractor.			
<p><b>MM N-4. Implement Noise-Reducing Measures for Construction Equipment Used within 150 feet of Residences</b></p> <p>During construction, the construction contractor shall employ the following noise-reducing measures where use of construction equipment occurs within 150 feet of residences (considered a sensitive receptor) on Coast Road, east and west of Old Dairy Gulch, and south of Panther/Yellowbank Beach): (1) Use acoustical shelters around air compressors, generators, and any other stationary construction equipment; (2) properly muffle and maintain all construction equipment powered by internal combustion engines; (3) prohibit unnecessary idling of internal combustion engines; and (4) whenever feasible, use electrical power to run air compressors and similar power tools.</p>	Implement noise-reducing measures for construction equipment, as described in the measure.	During construction.	On-going throughout Project construction.	RTC and CFL and construction contractor.			
<b>Transportation/Circulation</b>							

<sup>12</sup> This mitigation measure is a refinement of Mitigation Measure N-1(a) (Construction Hours) from the MBSST 2013 Master Plan EIR. The original measure has been revised to consider Project-specific details, the specific locations of nearby sensitive receptors, and specific local noise concerns and regulation (County of Santa Cruz Noise Ordinance).

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Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p><b>MM T-1. Public Outreach for Bicycling and Walking</b>                      Prior to operation of the North Coast Rail Trail, the RTC shall publish informational materials, in print and/or on-line, that explain how pedestrians and bicyclists can access the trail from within the City of Santa Cruz, including from other segments of the MBSST Network and other existing paved trails. The RTC also shall coordinate with the City of Santa Cruz to install signage in a highly visible location on the MBSST that includes a map of paved bicycle and pedestrian access routes to the North Coast.</p>	Publish trail access outreach materials.	Prior to trail opening.	Once.	RTC.			
<p><b>MM T-3(a). Design Roadway Crossings to Minimize Safety Hazards<sup>13</sup></b>                      The Federal Highway Administration Central Federal Lands Highway Division (CFL) shall design trail crossings with public roadways to minimize potential safety hazards. This shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Caution signs shall be installed along vehicular roadways preceding each trail crossing to warn motorists of trail users</li> <li>▪ Right-of-way priority shall be given to the facility with the higher volume of traffic, and indicated with appropriate stop sign or yield sign given to the cross traffic</li> </ul> <p>Crossings with public roads shall be designed so that the approaching driver and bicyclist or pedestrian have a view of each other within the appropriate stopping sight distance suggested by AASHTO Guidelines. This sight distance shall be provided through a combination of measures such as minor vegetation trimming and/or removal, sidewalk/shoulder curb extensions, roadway realignment or narrowing, etc.</p>	Design trail crossings with public roadways to minimize safety hazards, as described in the measure.	Construction planning phase.	Once.	RTC and CFL.			
	Ensure that trail crossings are built to minimize hazards, as described in the measure.	During construction.	On-going as part of construction inspections.	RTC and CFL.			

<sup>13</sup> This mitigation is a refinement of Mitigation Measures T-3(a) (Trail Crossing Warning Signs), T-3(c) (Right-of-Way Priority), and T-5(b) (Line-of-Sight) in the MBSST 2013 Master Plan EIR.



Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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<p><b>MM T-3(b). Install Agricultural Vehicle and Trail Warning Signs</b></p> <p>Informational signs shall be installed along the trail, preceding agricultural road crossings, warning trail users of the presence of agricultural vehicles. Informational signs shall also be installed on the roadways preceding the trail crossings and where agricultural access points intersect with adjacent roadways, warning operators about the presence of pedestrians and bicyclists.</p>	Install signage warning trail users of agricultural vehicle crossings, as specified in the measure.	Install signage prior to trail opening.	Maintain signage on an on-going basis as part of trail management.	CFL, and RTC and/or designated Trail Manager.			
<p><b>MM T-3(c). Install Pedestrian Signage at Davenport Lot: South</b></p> <p>To minimize jaywalking behavior by new trail users and pedestrians leaving the Davenport Lot: South, informational signage shall be installed to direct pedestrians who desire to cross Highway 1 to the formalized pedestrian crossing of Highway 1 at Ocean Street, adjacent to the improved Davenport Lot: North.</p>	Install signage for pedestrian safety, as specified in the measure.	Prior to trail opening.	On-going as part of trail management.	CFL, and RTC and/or designated Trail Manager.			
<b>Tribal Cultural Resources</b>							
<p><b>TCR-1. Conduct Native American Monitoring during Construction</b></p> <p>A Native American monitor shall be retained and remain present during ground disturbing activities within previously undisturbed native soils, including any archaeological excavation, and shall participate in the orientation meeting required under Mitigation Measure CR-2(b) in Section 3.5, <i>Cultural Resources</i>. In the event that cultural resources of Native American origin are identified during construction, the Native American monitor shall have the authority to halt and redirect ground disturbance away from the find. The RTC and/or the State Parks District Tribal Liaison, as appropriate, shall consult with a qualified archaeologist and begin or continue Native American consultation procedures. If the RTC and/or State Parks District Tribal Liaison, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in</p>	Include a Native American monitor in the orientation meeting required by MM-CR-2(b) and in monitoring of ground disturbing activities.	During construction.	On-going throughout Project construction.	RTC and CFL – Native American monitor.			

Santa Cruz County Regional Transportation Commission  
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Mitigation Measure	Action Required	Implementation Timing	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
<p>accordance with state guidelines and in consultation with Native American groups. The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.</p>							

**EIR Table 3.4-5 (MM BIO-8(d)): Preferred Timing for Construction Activities Listed By Biological Resource**

<b>Biological Resource</b>	<b>Preferred Period of Avoidance</b>	<b>Life Events/Functions/ Values to be Protected</b>	<b>Construction Activity to Be Avoided</b>	<b>Preferred Construction Window</b>
Arroyo Willow Riparian/Habitats below the break in bank	Rainy season, approximately November 1-June 15	Stable banks, slopes, and soil	All construction	June 15-October 15
Sensitive Fish Species <sup>b</sup>	Rainy season, approximately November 1-June 15	Fish migration/critical habitat functions and values	Work below the break in bank and in arroyo willow riparian vegetation	June 15-October 15
California Red-Legged Frog (CRLF)	Rainy season, approximately November 1-June 15	Movement and dispersal/ breeding/critical habitat functions and values	Vegetation removal, and work within or near aquatic features	June 15-October 15
Bird Species	February 1-September 15	Nesting activities	All construction within designated buffers	September 15-January 31
Bat Species	November 1-February 15 and May 1-September 1	Roosting, especially maternity roosts, if present and winter hibernacula	Cutting, limbing, and tree removal	February 15-May 1 and September 1-November 1
San Francisco Dusky-Footed Woodrat	November 1-July	Houses, especially during breeding and rearing	Vegetation/tree removal and woodrat relocation	August 1-October 30

<sup>a</sup> Central California coast coho salmon, central California coast steelhead, and tidewater goby.

Note: Each "preferred" timeframe or construction window indicates the type of construction activity to be avoided, if possible, and not all windows apply to all resources. Ideally, most if not all vegetation clearing and tree removal will be done during the fall, whereas there is more flexibility with the other timeframes.