

**MITIGATION MONITORING AND REPORTING
PROGRAM (MMRP)
FOR THE
MIRABEL ROAD CORRIDOR IMPROVEMENTS AND WEST
COUNTY TRAIL PROJECT**

State Clearinghouse: 2025100051



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Mitigation Monitoring and Reporting Program

<i>Environmental Factor</i>	<i>Mitigation Measures</i>	<i>Level of Impact</i>	<i>Responsible Party</i>	<i>Timing</i>
Biological Resources				
Impact: Impacts on the California Red-legged Frog, California Giant Salamander, and Northwestern Pond Turtle.				
Biological Resources	<p><u>Mitigation Measure BIO-1: Seasonal Work Restrictions</u></p> <p>Work shall be avoided within non-developed habitat from October 15 (or the first measurable fall rain of 1 inch or greater) to April 15. If avoidance is not feasible, work may be performed during the wet season in upland areas where clearing and grubbing have already been completed, so that habitat conditions for special-status species are no longer suitable, and where exclusion fencing isolates suitable habitats from the work area.</p>	Less than Significant with Mitigation	Sonoma County and their contractor	Avoid October 15 (or the first measurable fall rain of 1 inch or greater) to April 15
Biological Resources	<p><u>Mitigation Measure BIO-2: Worker Environmental Awareness Training</u></p> <p>All construction personnel shall attend a mandatory Worker Environmental Awareness Training Program delivered by a qualified biologist prior to working within the project area. The program shall include an explanation of the laws protecting sensitive biological resources and how to best avoid and minimize impacts on sensitive habitats and species.</p>	Less than Significant with Mitigation	Sonoma County and qualified biologist	Prior to construction
Biological Resources	<p><u>Mitigation Measure BIO-3: Preconstruction Surveys</u></p> <p>A qualified biologist shall conduct pre-construction surveys for California red-legged frogs, California giant salamanders, and northwestern pond turtles in potential habitat no more than 48 hours prior to commencement of project activities. If individuals are found, work shall not begin until the individuals have moved on their own, or are relocated by a qualified biologist (which would require USFWS and CDFW approval), out of the construction zone to an appropriate relocation site. In the unlikely event that individual California red-legged frogs are present, consultation with the USFWS under the Federal Endangered Species Act may be necessary before individuals are impacted.</p>	Less than Significant with Mitigation	Sonoma County and qualified biologist	No more than 48 hours prior to commencement of project activities.

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Biological Resources	<p><u>Mitigation Measure BIO-4: Construction Monitoring</u></p> <p>A qualified biologist shall be present for initial ground disturbing activities, including vegetation clearing and grubbing. If any California red-legged frogs, California giant salamanders, or northwestern pond turtles are detected within areas where they could be impacted by project activities, they shall be allowed to move out of the impact areas on their own. If they will not do so, the qualified biologist shall relocate any individuals found within the impact area to appropriate locations outside the site (which would require USFWS and CDFW approval). Following the completion of initial clearing and grubbing, the qualified biologist shall inspect the site weekly during the remainder of construction activities. If an animal that is thought to potentially be a California red-legged frog, California giant salamander, or northwestern pond turtle is detected by construction personnel, all work that could affect the animal shall stop; a qualified biologist shall be contacted; and the qualified biologist shall determine whether the animal is a California red-legged frog, California giant salamander, or northwestern pond turtle and relocate the animal as described above.</p>	Less than Significant with Mitigation	Sonoma County and qualified biologist	Prior to construction
Biological Resources	<p><u>Mitigation Measure BIO-5: Monofilament Plastic</u></p> <p>No monofilament plastic shall be used in erosion control features to avoid entanglement of frogs, salamanders, or turtles.</p>	Less than Significant with Mitigation	Sonoma County and their contractor	During construction
Biological Resources	<p><u>Mitigation Measure BIO-6: Inspection of Open Trenches</u></p> <p>Construction personnel shall inspect open trenches in the morning and evening for trapped California red-legged frogs, California giant salamanders, and northwestern pond turtles. If any individuals are found trapped, all work that could affect the animal shall stop; a qualified biologist shall be contacted; and the qualified biologist shall determine whether the animal is a California red-legged frog, California giant salamander, or northwestern pond turtle and</p>	Less than Significant with Mitigation	Sonoma County and their contractor	During construction

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	relocate the animal as described above.			
Impact: Impacts on Riparian/Stream Habitat and Other Sensitive Communities.				
Biological Resources	<p><u>Mitigation Measure BIO-7: Riparian Vegetation Protection</u></p> <p>Removal of riparian vegetation and trees shall be limited to the minimum extent required to construct the proposed project. All riparian trees to be avoided shall be protected by installing orange construction fencing around the Tree Protection Zone (TPZ), which is defined as the dripline of their canopies. Any work that must take place within the TPZ must be observed by an arborist to help direct the work to protect the tree. Minimize pruning by tying back limbs, where possible, instead of trimming. Do not store materials within TPZ.</p>	Less than Significant with Mitigation	Sonoma County and qualified arborist	During construction
Biological Resources	<p><u>Mitigation Measure BIO-8: Dewatering</u></p> <p>Project-related construction activities shall be performed outside of the rainy season, April 15–October 15, which will minimize year-round flows that may potentially need to be dewatered for project activities. The proposed project shall comply with all measures in the general construction permit that pertain to dewatering and water quality protection.</p>	Less than Significant with Mitigation	Sonoma County and their contractor	Avoid October 15 (or the first measurable fall rain of 1 inch or greater) to April 15
Biological Resources	<p><u>Mitigation Measure BIO-9: Compensate for Impacts to Mixed Riparian and Intermittent Stream Habitat</u></p> <p>Permanent impacts within mixed riparian habitat and intermittent stream shall be mitigated at a minimum 3:1 ratio (mitigation area to impact area). Prior to construction, the project proponent shall purchase credits from a mitigation bank approved by the applicable resource agencies and/or prepare a Mitigation and Monitoring Plan (MMP) describing the habitat creation, restoration, and/or enhancement that will satisfy the mitigation requirements for permanent impacts. Impacts on jurisdictional aquatic habitat may not commence until the adequate credits in a mitigation bank have been purchased and/or any relevant regulatory agencies approve the MMP, so that the total mitigation requirement</p>	Less than Significant with Mitigation	Sonoma County and qualified restoration ecologist	Prior to construction

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	<p>is satisfied. A MMP would include enhancement of a riparian corridor in the region of Sonoma County within the Russian River watershed. This enhancement would consist of seeding of native vegetation appropriate to the site, and management of any particularly noxious occurrences of invasive plants, in a way that will enhance the structure and function of the riparian habitat.</p> <p>The MMP would be prepared by a qualified restoration ecologist and would include the following:</p> <ul style="list-style-type: none"> • a summary of riparian and wetland impacts and the proposed riparian and wetland enhancement mitigation • goals of the restoration to achieve no net loss of habitat functions and values • the location of the mitigation site and description of existing site conditions • mitigation design: <ul style="list-style-type: none"> ○ existing and proposed site hydrology, geomorphology, and geotechnical stability, if applicable ○ grading plan if appropriate, including bank stabilization or other site stabilization features ○ soil amendments and other site preparation elements as appropriate ○ planting/seeding plan with riparian or wetland species, such as meadow barley (<i>Hordeum brachyantherum</i>), wild rye (<i>Elymus triticoides</i>), and California brome (<i>Bromus carinatus</i>) ○ irrigation and maintenance plan ○ construction schedule • monitoring plan (including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). Performance criteria will include maintaining a maximum of 5 percent cover of invasive species and 70 percent cover of non-invasive species, where invasive species are defined as species that are ranked as High by Cal-IPC. • a contingency plan for mitigation elements that do not meet performance 			

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	<p>or final success criteria within five years; this plan will include specific triggers for remediation if performance criteria are not being met.</p> <p>Temporarily impacted areas of mixed riparian and intermittent stream habitat will be restored on site in place at a 1:1 ratio through clearing and grubbing of invasive species such as Himalayan blackberry and greater periwinkle, applying a native seed mix, and three years of photo monitoring.</p>			
Biological Resources	See Mitigation Measures BIO-1: Seasonal Restrictions above, which would contribute with the reduction of impacts on riparian/stream habitat and other sensitive communities.	Less than Significant with Mitigation	Sonoma County and their contractor	Avoid October 15 (or the first measurable fall rain of 1 inch or greater) to April 15
Impact: Permanent loss or temporary disturbance of wetland habitat.				
Biological Resources	<p><u>Mitigation Measure BIO-10: Compensatory Mitigation for Wetland Habitats</u></p> <p>Mitigation for temporary or permanent impacts on wetlands may be achieved through one or more options, potentially including (but not limited to):</p> <ul style="list-style-type: none"> • On-site restoration or creation of wetlands or aquatic habitats (including removal of on-site fill) if feasible on-site restoration opportunities exist; • off-site restoration/creation of wetlands; or • purchase of 0.08 acre of mitigation credits at approved mitigation banks within the Sonoma County region (e.g., East Austin Creek Conservation Bank or Hale Mitigation Bank may provide appropriate wetland mitigation credits and the site is within the banks' service area). <p>While none are anticipated, if forested wetland, seasonal wetland, or perennial emergent wetland habitat turn out to be temporarily impacted by project activities (i.e., non-grading activities that don't change the hydrology or topography) in the final project design, it will be restored in-place at 1:1 (restoration area: impact area) within one year or less using a native seed mix. For permanent impacts, if bank credits are purchased as mitigation, the amount</p>	Less than Significant with Mitigation	Sonoma County and qualified restoration ecologist	Prior to construction

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	of compensatory mitigation provided will be at least 2:1 (i.e., at least equivalent to double the acreage of jurisdictional wetlands permanently impacted). If wetlands are created as mitigation (permittee-responsible mitigation), the amount of compensatory mitigation provided will be at least 2:1 to account for the time required for created wetland to reach maturation and replace the ecological function of the impacted wetland habitat. This permittee-responsible mitigation would be outlined in an MMP under the same requirements described under MM BIO-9. Success criteria for wetlands will include a maximum of 5 percent cover of species ranked as High by Cal-IPC and 70 percent cover of non-invasive species.			
Biological Resources	See Mitigation Measures BIO-1, BIO-7, and BIO-8 above, which would contribute with the reduction of impacts on wetlands.	Less than Significant with Mitigation	Sonoma County and their contractor	During construction Avoid October 15 (or the first measurable fall rain of 1 inch or greater) to April 15

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Cultural Resources				
Impact: Environmentally Sensitive Area (ESA) delineation and unanticipated archaeological discoveries during construction				
Cultural Resources	<p><u>Mitigation Measure CUL-1: Construction Buffer Zone to Avoid Impacts to the Environmentally Sensitive Area</u></p> <p>Establish an ESA around MB-01 and a 10-foot buffer to avoid inadvertent adverse impacts by the proposed project during construction. The ESA shall be established with the placement of high visibility fencing, flagging tape, cones, or other boundaries to prevent activities beyond the proposed project footprint. In addition, the area shall be clearly marked on project plans, a sign posted noting the area as environmentally sensitive, and the construction crew informed of the ESA prior to the onset of work. In order to maintain confidentiality of the location of an archaeological resource, signage, markings, and notifications should not mention the nature of the resource.</p>	Less than Significant with Mitigation	Sonoma County	Prior to construction
Cultural Resources	<p><u>Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources</u></p> <p>In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be Native American in nature, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of the California Code of Regulations (CCR) Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds</p>	Less than Significant with Mitigation	Sonoma County, qualified archaeologist, and Native American monitor	During all ground disturbing phases of construction

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	<p>to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource’s significance. The City shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).</p>			
Geology and Soils				
Impact: During construction, ground-disturbing activities within previously undisturbed sediments with high paleontological sensitivity could result in significant impacts to paleontological resources under CEQA.				
Geology and Soils	<p>Mitigation Measure GEO-1: Paleontological Resources Monitoring</p> <p>Qualified Professional Paleontologist. Prior to excavation, the project applicant shall retain a Qualified Professional Paleontologist, as defined by the Society of Vertebrate Paleontology to direct mitigation measures related to paleontological resources.</p> <p>Paleontological Worker Environmental Awareness Program. Prior to the start of construction, the Qualified Professional Paleontologist or their designee shall conduct a paleontological Worker Environmental Awareness Program training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction personnel.</p> <p>Paleontological Monitoring and Salvage. Full-time paleontological monitoring shall be conducted during ground-disturbing construction activities within previously undisturbed sediments exceeding 2 feet in depth in areas mapped as the Wilson Grove Formation. Paleontological monitoring shall be conducted by a paleontological monitor with experience with collection and salvage of paleontological resources and who meets the minimum standards of the Society</p>	Less than Significant with Mitigation	Sonoma County and qualified professional Paleontologist	Prior to and during ground disturbing phases of construction

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	<p>of Vertebrate Paleontology for a Paleontological Resources Monitor.</p> <p>The Qualified Professional Paleontologist may recommend that monitoring be reduced in frequency or ceased entirely based on geologic observations. Such decisions shall be subject to review and approval by the County of Sonoma. In the event of a fossil discovery by the paleontological monitor or construction personnel, all construction activity within 50 feet of the find shall cease, and the Qualified Professional Paleontologist shall evaluate the find. If the fossil(s) is (are) not scientifically significant, then construction activity may resume. If it is determined that the fossil(s) is (are) scientifically significant, the following shall be completed:</p> <ul style="list-style-type: none"> • The paleontological monitor shall salvage (excavate and recover) the fossil to protect it from damage/destruction. Typically, fossils can be safely salvaged quickly by a single paleontological monitor with minimal disruption to construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically sensitive deposits. After the fossil(s) is (are) salvaged, construction activity may resume. • Fossils shall be identified to the lowest (most-specific) possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection along with all pertinent field notes, photographs, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the Qualified Professional Paleontologist. <p>Upon completion of ground-disturbing activities (or laboratory preparation and curation of fossils, if necessary), the Qualified Professional Paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts. The report shall include a summary of the field and laboratory methods</p>			

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	employed; an overview of project geology; and, if fossils were discovered, an analysis of the fossils, including physical description, taxonomic identification, and scientific significance. The report shall be submitted to the County of Sonoma and, if fossil curation occurred, the designated scientific institution.			
Hazards and Hazardous Materials				
Impact: During construction, the normal functionality of Mirabel Road would be temporarily altered with partial lane closures and traffic controls to accommodate construction activities impacting on emergency evacuation.				
Hazards and Hazardous Materials	<p><u>Mitigation Measure HAZ-1: Minimize Emergency Evacuation Impacts during Construction</u></p> <p>During construction, the County and its contractor shall implement traffic controls to ensure Mirabel Road remains a viable emergency evacuation route, including:</p> <ul style="list-style-type: none"> • During construction, at least one lane in each direction of Mirabel Road shall be kept open at all times. Through traffic shall be maintained through temporary signals, flaggers or other means. • Access to driveways and public and private roads shall be maintained, as feasible, by using steel trench plates. If access must be restricted for brief periods (more than one hour), property owners shall be notified by the County and its contractor in advance of such closures. • Construction shall be coordinated with emergency service providers and administrators of land uses that may be more affected by traffic impacts, such as fire stations, schools, hospitals, and ambulance providers. As construction progresses, emergency providers, and other land uses as mentioned above, shall be notified in advance of construction of the timing, location, and duration of construction activities and the locations and durations of any temporary detours and/or lane closures. • The contractor shall be required to have ready the means necessary to accommodate access by emergency vehicles, such as plating over excavations, flaggers or other means. 	Less than Significant with Mitigation	Sonoma County and their contractor	During construction

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	<ul style="list-style-type: none"> The contractor shall coordinate traffic control plans with other simultaneous construction projects along Mirabel Road, if any, to minimize impacts to congestion, emergency access, and alternative modes of transportation. 			
Impact: Wildfire risk if construction occurs during the dry season.				
Hazards and Hazardous Materials	<p><u>Mitigation Measure HAZ-2: Reduce Wildland Fire Hazards</u></p> <p>At the start of construction, the County and its contractor shall remove or clear away dry, combustible vegetation from within the area of direct impact. Grass and other vegetation less than 18 inches in height above the ground shall be maintained in the construction area where necessary to stabilize the soil and prevent erosion. Vehicles shall not be parked in areas where exhaust systems contact combustible materials. Fire extinguishers shall be available to assist in quickly extinguishing any small fires, and contractors shall have on site the direct phone number for the local fire departments.</p>	Less than Significant with Mitigation	Sonoma County and their contractor	At the start of construction
Noise				
Impact: During construction, anticipated to take 6-9 months, noise would be temporary and intermittent in nature.				
Noise	<p><u>Mitigation Measure NOI-1: Reduce Construction Noise</u></p> <p>To reduce construction noise, the County shall require the contractor to implement the following measures:</p> <ul style="list-style-type: none"> Limit hours of construction to avoid the early morning and evening hours (such as 7 am to 7 pm weekdays and 7 am to 5 pm weekends). Limit work to non-motorized equipment on Sundays and holidays. Use sound blankets for loud operations such as air compressors or other mechanical equipment. Site construction staging areas as far as practical from nearby sensitive receptors. Require street legal mufflers on construction equipment. 	Less than Significant with Mitigation	Sonoma County	During construction

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Transportation				
Impact: Construction activities may result in traffic delays possibly slowing emergency response vehicles.				
Transportation	See Mitigation Measure HAZ-1: Minimize Emergency Evacuation Impacts during Construction above.	Less than Significant with Mitigation	Sonoma County and their contractor	During construction
Tribal Cultural Resources				
Impact: Construction related impacts on tribal cultural resources due to the possible presence of unknown tribal cultural resources within the project area.				
Tribal Cultural Resources	See Mitigation Measure CUL-1: Construction Buffer Zone to Avoid Impacts to the Environmentally Sensitive Area and Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources above.	Less than Significant with Mitigation	Sonoma County, qualified archaeologist, and Native American	Prior to construction and During all ground disturbing phases of construction
Wildfire				
Impact: Construction related impacts on wildland fire risk within the project area.				
Wildfire	See Mitigation Measure HAZ-2: Reduce Wildland Fire Hazards above.	Less than Significant with Mitigation	Sonoma County and their contractor	At the start of construction

Source: Mirabel Road Widening Project IS/MND, 2025.