

Livingston Solar Energy and Battery Storage Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
Agriculture and Forestry Resources				
MM AG-1	<p>Agricultural Resources. At the time of application for building and construction permits, the project applicant shall offset impacts associated with conversion of productive agricultural land (defined as land designated “Prime Farmland,” “Farmland of Statewide Importance,” and “Unique Farmland” by the State Department of Conservation as shown on their latest Important Farmland Map, prepared in accordance with the Farmland Mapping and Monitoring Program) to non-agricultural uses by implementing one of the options described below:</p> <p>Option 1. Agricultural Land Easement. If Option 1 is selected, the project Applicant shall offset impacts associated with conversion of productive agricultural land to non-agricultural uses by arranging for the imposition of an agricultural conservation easement on no less than 1 acre of mitigation land for each acre of land proposed for conversion. The agricultural easement on mitigation land shall be held in perpetuity by a qualified entity that operates in Merced County, or by Merced County on a temporary basis until transferred to a qualified entity, and shall meet the following criteria (as detailed in Merced County Code Section 9.30.050):</p> <ol style="list-style-type: none"> a. Location. The mitigation land shall be located within Merced County. b. Land Uses. The mitigation land is subject to an agricultural designation in the General Plan and zoned for agricultural use and is located outside a city sphere of influence as adopted by the Local Agency Formation Commission of Merced County. The type of agricultural-related activity allowed on the mitigation land shall be specified in the easement and is at least as restrictive as the requirements of the agricultural zoning district. The agricultural easement shall prohibit all residential, commercial, or industrial development and any land uses or activities that substantially impair or diminish the agricultural productive capacity of the mitigation land or that are otherwise inconsistent with the conservation purposes of this chapter. Any legal nonconforming use of the mitigation land shall be abandoned prior to execution of the agricultural easement, or if maintained, will not interfere with agricultural use of the mitigation land. c. Soil Quality. The soil quality of the mitigation land shall have the agricultural productive capacity equivalent to or better than that of the land proposed for conversion. d. Water Supply. The available water supply for the mitigation land shall be at least equal to that of the land proposed for conversion in terms of quantity, quality, and security. The water supply on the agricultural mitigation land shall be protected in the farmland conservation easement or other document evidencing the agricultural mitigation. 	<p>Submittal of documentation demonstrating imposition of an agricultural conservation easement, payment of in lieu fee, or implementation of alternative mitigation method</p>	<p>At the time of application for building and construction permits</p>	<p>Project Applicant</p>

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	<p>e. Existing Interests and Encumbrances. The mitigation land shall not be already subject to an encumbrance or interest that would legally or practicably prevent converting the land, in whole or in part, to a nonagricultural use, such as a conservation easement, open space easement, flowage easement, avigation easement, long-term agricultural lease, profit, or an interest in the subsurface estate that would preclude development of the surface estate. A contract entered pursuant to the Williamson Act shall not constitute an encumbrance for purposes of this section.</p> <p>f. Physical Limitations. There shall be no physical conditions or contamination on the mitigation land that would legally or practicably prevent converting the land, in whole or in part, to a nonagricultural use.</p> <p>g. Existing Home. The mitigation land shall have no existing home, unless the land proposed for conversion includes an existing home.</p> <p>h. Public Ownership. The mitigation land may be owned by a public agency if it is managed for compatible agricultural use in perpetuity similar to an agricultural easement placed on privately owned land.</p> <p>i. Permanently Preserve. The mitigation land shall conform to the perpetuity requirements contained in Internal Revenue Service Code Section 170(h) to ensure the land will satisfy the intent of this ordinance to permanently preserve the agricultural land placed under easement.</p> <p>Option 2. Payment of an In-Lieu Fee. As an alternative to Option 1 as detailed above, the applicant may choose to seek approval to implement the following alternative mitigation option, as detailed in Merced County Code Section 9.30.040:</p> <p>a. In-Lieu Fee. An applicant for conversion may satisfy the mitigation obligation set forth in Merced County Code Section 9.30.030(B) by paying to a qualified entity a fee in lieu of conveying an agricultural easement. If a qualified entity is unwilling or unable to accept the in-lieu fee and acquire an agricultural easement, the in-lieu fee may be paid to Merced County.</p> <p>Merced County shall establish the amount of in-lieu fees on a case-by-case basis unless the applicant for conversion has reached agreement on the fee amount with a qualified entity, or unless Merced County has previously adopted the resolution provided for in Merced County Code Section 9.30.040(B)(5).</p> <p>Option 3. Applicant-Designed Mitigation Options. The applicant proposing conversion may propose an alternative method of mitigation for review and approval by Merced County subject to the requirements of the Merced County Code. Proposed alternative mitigation must satisfy all of the following criteria:</p> <p>a. The proposed mitigation must result in permanent protection of mitigation land;</p> <p>b. The applicant must bear all costs of reviewing, approving, managing, and enforcing the mitigation;</p>			

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	<ul style="list-style-type: none"> c. The proposed mitigation must be in substantial compliance with the requirements for mitigation land and agricultural easements set forth in Merced County Code Section 9.30.050; and d. The proposed mitigation must be in all respects at least as protective of agricultural land as the mitigation required by the Merced County Code. 			
Air Quality				
MM AQ-1	<p>Permit Requirements. Prior to ground disturbance and construction, the Construction Contractor shall obtain all required permits for dust control and the use of portable equipment, 50 horsepower or greater, from the San Joaquin Valley Air Pollution Control District. Upon application for construction permits, all required mitigation measures shall be shown on all applicable grading or construction plans and implemented during all applicable grading and construction activities.</p>	<p>The Construction Contractor shall obtain all required permits for dust control and the use of portable equipment</p>	<p>Prior to ground disturbance and construction</p>	<p>Project Applicant, San Joaquin Valley Air Pollution Control District</p>
MM AQ-2	<p>Dust Control Measures. No person shall perform any construction, demolition, excavation, extraction, or other earth-moving activities unless measures are sufficiently implemented to limit visible dust emissions (VDE) to 20 percent opacity and comply with the conditions for a stabilized surface area when applicable. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of San Joaquin Valley Air Pollution Control District Regulation VIII. An individual shall monitor the fugitive dust emissions to ensure the following requirements are met:</p> <ul style="list-style-type: none"> b. Pre-Activity: <ul style="list-style-type: none"> 1. Pre-water site sufficient to limit VDE to 20 percent opacity, and 2. Phase work to reduce the amount of disturbed surface area at any one time. b. During Active Operations: <ul style="list-style-type: none"> 1. Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; 2. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If utilizing wind barriers, control measure 2.a above shall also be implemented; and 3. Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the conditions of a stabilized unpaved road surface. c. Temporary Stabilization During Periods of Inactivity: <ul style="list-style-type: none"> 1. Restrict vehicular access to the area; and 2. Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for 7 or 	<p>Implement measures to limit visible dust emissions</p>	<p>Prior to and during ground disturbance and construction activities on the project site</p>	<p>Project Applicant</p>

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	more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.			
MM AQ-3	Construction Emissions. The project shall utilize clean off-road construction equipment, including the latest tier equipment, where feasible.	Utilize clean off-road construction equipment	During construction activities on the project site	Project Applicant

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<i>Biological Resources</i>				

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MM BIO-1	<p>Nesting Bird Surveys. Nesting Bird Surveys. If construction activities involving ground disturbance or vegetation removal are proposed during the typical nesting bird season (February 1–September 15), a nesting bird survey shall be conducted by a qualified biologist no more than 10 days prior to the start of ground disturbance to determine presence/absence of nesting birds. Surveys shall cover all areas potentially affected by the project via direct impacts (e.g., nest destruction) or indirect impacts (e.g., noise, vibration, odors, movement of workers or equipment, etc.). If absence of nesting birds is verified, construction can proceed. If nesting activity is detected, the following measures shall be implemented:</p> <ol style="list-style-type: none"> a. Buffer Establishment. If an active bird nest is observed during preconstruction surveys or during construction, a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors shall be implemented using high visibility markers or fencing. If an active tricolored blackbird nesting colony is found during preconstruction surveys, a 300-foot no-disturbance buffer shall be implemented. These buffers shall remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. b. Variance of Buffer Distances. Variance from the no-disturbance buffers described above may be allowable when there is a compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. Any variance from the no-disturbance buffers shall be advised and supported by a qualified biologist and CDFW shall be notified in advance of implementing a variance. c. Nesting Monitoring. If nest buffers are reduced, the biologist shall monitor any construction activities that take place within 250 feet of non-listed bird species nests, within 300 feet of an active tricolored bird nesting colony, and 500 feet of non-listed raptor nests. If nesting birds show any signs of disturbance, including changes in behavior, significantly reducing frequency of nests visits, or refusal to visit the nest, the biologist will stop work and increase the nest buffer. If appropriate on a case-by-case basis, as determined by the qualified biologist, nest monitoring may be reduced to weekly spot-check monitoring, at a minimum, if the biologist determines that the nesting birds have shown no signs of disturbance from construction activities and a continuation of the same types of construction activities are unlikely to disturb the nesting birds. d. Nest Removal. Nests, eggs, or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be moved or disturbed until a qualified biologist has determined that the nest has become inactive or young have fledged and become independent of the nest. e. Reporting. A qualified biologist shall document all active nests and submit a letter report to Merced County documenting project compliance with the Migratory Bird Treaty Act, California Fish and Game Code, and applicable project mitigation measures. 	<p>Survey results shall be submitted to Merced County</p>	<p>If construction activities are proposed during the typical nesting bird season (February 15–September 15); within 2 weeks prior to construction activities on the project site</p>	<p>Project Applicant</p>

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MM BIO-2	<p>Burrowing Owl Preconstruction Surveys. A qualified biologist shall conduct preconstruction surveys of all areas of potential habitat that will be permanently or temporarily impacted, plus a 150-meter (approximately 492 feet) buffer in areas subject to legal access, to locate active breeding or wintering burrowing owl burrows. The survey(s) shall occur no more than 14 days prior to ground-disturbing activities (e.g., vegetation clearance, grading). The survey methodology shall be consistent with the take avoidance survey methods outlined in the California Department of Fish and Wildlife <i>Staff Report on Burrowing Owl Mitigation</i> (California Department of Fish and Wildlife 2012). Because burrowing owl may re-colonize a site after periods of inactivity, time lapses of 7 days during the breeding season or 14 days during the non-breeding season between project activities shall trigger subsequent surveys, including, but not limited to, a final survey conducted within 24 hours prior to ground disturbance to identify any additional burrowing owl or burrows necessitating avoidance, minimization, or mitigation measures. The need for additional surveys will be at the final discretion of the biologist.</p>	Survey results shall be submitted to Merced County	Within 2 weeks prior to construction activities on the project site. If period(s) of inactivity occurs, within 24 hours of construction activities on the project site	Project Applicant
MM BIO-3	<p>Burrowing Owl Avoidance. If burrowing owl(s) are detected on-site during preconstruction surveys or during construction, no ground-disturbing activities within a minimum 200-meter (approximately 656 feet) avoidance buffer shall occur around occupied burrows during the breeding season (February 1–August 31), unless authorized by the California Department of Fish and Wildlife. During the non-breeding season (September 1–January 31), no ground-disturbing activities within a minimum 50-meter (approximately 164 feet) avoidance buffer shall occur around occupied burrows, unless authorized by the California Department of Fish and Wildlife.</p>	If present, avoid ground-disturbing activities around occupied burrows	If burrowing owl are detected on-site; during construction activities on the project site	Project Applicant
MM BIO-4	<p>Burrowing Owl Mitigation. If occupied burrow avoidance is infeasible during the non-breeding season or during the breeding season where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, the applicant shall coordinate with the California Department of Fish and Wildlife to develop a Burrowing Owl Exclusion and Mitigation Plan. The plan shall differentiate strategies for active burrows found on the project site vs. active burrows found adjacent to the project site. For example, an Exclusion and Mitigation Plan strategy may include:</p> <ol style="list-style-type: none"> a. Passive exclusion of burrowing owl from burrows within the project site using one-way doors. b. Excavation of potential burrowing owl burrows within the project site that are confirmed to be empty of burrowing owl adults and/or young. c. Creation of artificial burrowing owl burrows within the project property to offset the loss of known occupied burrowing owl burrows. d. Acquisition of burrowing owl conservation lands and/or bank credits. 	If applicable, a Burrowing Owl Exclusion and Mitigation Plan	If burrow avoidance is infeasible; prior to issuance of construction permits	Project Applicant

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MM BIO-5	<p>Swainson’s Hawk Surveys. To meet California Department of Fish and Wildlife recommendations for mitigation and protection of Swainson’s hawk, surveys shall be conducted for a 0.5-mile radius around all project activities. Surveys shall be conducted by a qualified biologist and follow the <i>Recommended timing and methodology for Swainson’s hawk nesting surveys in California’s Central Valley</i> (Swainson’s Hawk Technical Advisory Committee 2000). At a minimum, a qualified biologist shall conduct 3 surveys during two of the three recommended survey periods (Survey Periods II, III and V) totaling a minimum of six surveys prior to project initiation as outlined in the Swainson’s Hawk Technical Advisory Committee’s (2000) recommended methodology. Surveys shall be completed in Survey Periods II (March 20–April 5), III (April 5–April 20), and V (June 10–July 30). Surveys should not be conducted in Period IV (April 21–June 10). The survey periods are defined by the timing of migration, courtship, and nesting in a “typical” year for the majority of Swainson’s hawk; however, the best times to survey will vary depending on seasonal factors. Known nest locations should be visited during surveys to verify nesting activity in the area. If Swainson’s hawk absence is verified with 0.5 mile of the project site, project activities can proceed providing acceptance by the California Department of Fish and Wildlife of the survey results. Verification of acceptance of survey results by the California Department of Fish and Wildlife shall be submitted to Merced County prior to the start of construction.</p>	<p>Verification of acceptance of survey results by the California Department of Fish and Wildlife shall be submitted to Merced County</p>	<p>Prior to start of mobilization for construction activities</p>	<p>Project Applicant</p>
MM BIO-6	<p>Swainson’s Hawk Nest Protection. If a Swainson’s hawk nest is observed within 0.5 mile of the project site during the protocol surveys outlined in Mitigation Measure MM BIO-5 or during construction, the applicant shall coordinate with the California Department of Fish and Wildlife to determine if an Incidental Take Permit is required and implement measures to avoid take of Swainson’s hawk. Such measures may include, but may not be limited to:</p> <ol style="list-style-type: none"> a. Implementation of avoidance buffers; b. Nest monitoring by a qualified biologist during construction activities; c. When possible, seasonal restrictions of specific project activities during the nesting season; and/or d. Acquisition of Swainson’s hawk conservation lands and/or bank credits. 	<p>Verification of acceptance by the California Department of Fish and Wildlife shall be submitted to Merced County</p>	<p>If a Swainson’s hawk nest is observed within 0.5 mile of the project site; prior to and during construction activities, potentially during operation if applicable</p>	<p>Project Applicant</p>
Cultural Resources				
MM CR-1	<p>Inadvertent Cultural Resource Encounter. In the event that cultural resources are encountered during project activities, all ground-disturbing activities within a 25-foot radius of the find shall cease and Merced County shall be notified immediately. Work shall not continue until a qualified archaeologist assesses the find and determines the need for further study. If the find includes Native American-affiliated materials, a local Native American tribal representative will be contacted to work in conjunction with the approved archaeologist to determine the need for further study. A standard inadvertent discovery clause shall be included in every grading and construction contract to inform contractors of this requirement.</p>	<p>Cease ground disturbing activities and immediately notify Merced County</p>	<p>In the event that cultural resources are encountered during project activities; during ground disturbance activities on the project site</p>	<p>Project Applicant</p>

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Noise				
MM N-1	<p>Construction Noise Control Best Management Practices. During construction, the following construction noise best management practices shall be shown on all construction plans and implemented on-site:</p>	<p>Measures shall be shown on all construction plans and implemented on-site</p>	<p>At the time of submittal of construction plans, during construction activities on the project site</p>	<p>Project Applicant</p>
<p>a. Construction work hours shall be limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday. No construction shall be permitted on Saturdays, Sundays, or federal or state holidays.</p>				
<p>b. Heavy equipment engines shall be covered, and exhaust pipes shall include a muffler in good working condition.</p>				
<p>c. Stationary equipment such as compressors, generators, and welder machines shall be located as far away from surrounding residence as possible. The project shall connect to existing electrical service at the site to avoid the use of stationary, diesel-fueled, or other alternatively fueled power generators, if feasible.</p>				
<p>d. Impact tools such as jack hammers shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. When use of pneumatic tools is unavoidable, it shall be ensured the tool will not exceed a decibel limit of 85 A-weighted decibels at a distance of 50 feet. Pneumatic tools shall also include a noise suppression device on the compressed air exhaust.</p>				
<p>e. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.</p>				
<p>f. Use construction equipment that is in good working order, and inspect mufflers for proper functionality.</p>				
<p>g. Use of "quiet" construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures) when feasible.</p>				
<p>h. Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors.</p>				
<p>i. Prohibit the idling of inactive construction equipment for more than 5 minutes;</p>				
<p>j. Measures for notifying the public of construction activities, complaint procedures, and monitoring construction noise levels shall include the following:</p>				
<p>i. Designation of an on-site construction noise manager for the project;</p>				

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	<ul style="list-style-type: none"> ii. Notify neighboring noise-sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pile driving, other activities that may generate noise levels greater than 75 A-weighted decibels at noise-sensitive receptors) about the timing and estimated duration of the activity; iii. Post a sign on-site describing noise complaint procedures and a complaint hotline number that shall always be answered during construction; iv. Implement a procedure for notifying the planning department of any noise complaints within one week of receiving a complaint. 			
	<p>k. Where feasible, the following additional measures shall be implemented for proposed pile-driving activities:</p> <ul style="list-style-type: none"> i. When pile driving is to occur within 600 feet of a noise-sensitive receptor, implement “quiet” pile-driving technology (such as pre-drilling of piles, sonic pile drivers, auger cast-in-place, or drilled-displacement, or the use of more than one pile driver to shorten the total pile-driving duration [only if such measure is preferable to reduce impacts to sensitive receptors]) where feasible, in consideration of geotechnical and structural requirements and conditions; ii. Where the use of driven impact piles cannot be avoided, properly fit impact pile driving equipment with an intake and exhaust muffler and a sound-attenuating shroud, as specified by the manufacturer and/or install a temporary noise barrier; and iii. Conduct noise monitoring (measurements) before, during, and after the pile-driving activity. 			
MM N-2	<p>Transformer Operation Noise. At the time of application for building and construction permits, the project applicant shall identify the material type of the proposed transformers housing encasements and the corresponding noise-reduction level. Appropriate manufacturer housing encasements or alternative enclosures shall be required to ensure transformer noise levels do not result in an increase in ambient noise levels above 56 dB during daytime hours (between 7:00 a.m. and 6:00 p.m.) or 50 dB during nighttime hours (between 6:00 p.m. and 7:00 a.m.) as measured from the property line of the nearest off-site sensitive land use. Supplemental enclosures or sound barriers may be used to reduce noise levels, or alternatively, the project plans may be designed to locate transformers within the equipment pad at a greater distance from off-site sensitive receptors, to ensure ambient noise levels do not exceed 56 dB during daytime hours or 50 dB during nighttime hours at the property line of the nearest off-site noise-sensitive land use, to be verified by Merced County. If existing ambient noise levels already exceed 56 dB during daytime hours or 50</p>	<p>Identify material type and noise reduction level of enclosures on project plans</p>	<p>At the time of application for building and construction permits</p>	<p>Project Applicant</p>

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	dB during nighttime hours, transformers shall be located within housing enclosures or at a greater distance from off-site noise-sensitive uses in a manner that does not result in an increase in ambient noise levels of greater than 5 dB as measured from the property line of the nearest off-site noise-sensitive land use.			

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