

# ***Livermore Community Solar Farm Mitigation Monitoring and Reporting Program***

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This Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the Livermore Community Solar Farm project. The purpose of the MMRP is to ensure that the mitigation measures identified in the EIR for the proposed project are implemented. The MMRP includes the following information:

- The full text of the mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

Alameda County must adopt this MMRP, or an equally effective program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

## MITIGATION MONITORING AND REPORTING PROGRAM

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<b>AESTHETICS</b>					
<p><b>Mitigation Measure AES-3:</b> In order to ensure the long-term effectiveness of the proposed landscaped berm, the Project applicant shall ensure that the proposed landscape berm is adequately irrigated to establish the long-term viability of the buffer and maintained throughout the life of the Project. Should any of the proposed landscape plantings not survive the initial planting or expire at any time during the life of the Project, the applicant shall provide replacement plantings, ranging from 8 to 15 feet in height upon maturity, to screen the proposed solar arrays within 5-years of planting.</p>	Project applicant	During project operation	County Planning Dept.	Conduct periodic site inspections	As needed, during project operation
<b>AIR QUALITY</b>					
<p><b>Mitigation Measure AQ-2:</b> The applicant shall require the construction contractor to comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM<sub>10</sub> and PM<sub>2.5</sub> during ground-disturbing construction activities:</p> <ul style="list-style-type: none"> <li>▪ Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour.</li> <li>▪ Apply water twice daily or as often as necessary to control dust or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.</li> <li>▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</li> <li>▪ Sweep driveway entrances and public street segments in the vicinity of the subject property (with water sweepers or similarly effective equipment) daily, or as often as needed, to keep streets free of visible soil material.</li> <li>▪ Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand).</li> <li>▪ Limit vehicle traffic speeds on unpaved roads to 15 mph.</li> <li>▪ Replant vegetation in disturbed areas as quickly as possible after construction in area has been completed.</li> <li>▪ Install sandbags or other erosion control measures to prevent silt runoff from public roadways.</li> </ul>	Project applicant/ construction contractor	Prior to issuance of building permits authorizing grading or other construction activities and during construction	County Building Dept.	Review construction plans and specifications/ conduct site inspections	During sscheduled cconstruction site inspections

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<b>BIOLOGICAL RESOURCES</b>					
<p><b>Mitigation Measure BIO-1:</b> The following measures shall be implemented to ensure avoidance of individual California tiger salamanders (CTS) and California red-legged frogs (CRLF) as individuals of these species could disperse onto the site and occur in ground squirrel burrows in advance of or during construction. Because CTS/CRLF could occur on the subject property and could be impacted during initial ground disturbance, the Project will require consultation with the USFWS and CDFW and the development of a CTS/CRLF relocation plan. The plan shall include at a minimum:</p> <ul style="list-style-type: none"> <li>▪ A detailed exclusion-fencing plan to enclose the subject property before the onset of fall/winter rains and to remain in place throughout one entire winter rainy season (October through April) with the purpose of 1) the fence will be designed to exclude CTS/CRLF from entering the site and 2) capturing CTS/CRLF within the subject property that are emerging from burrows and moving towards breeding ponds and/or creeks.</li> <li>▪ The exclusion fence should be constructed of silt fence or other suitable barrier material. Exclusion fence material must be at least 36 inches in height (at least 30 inches above ground and buried at least 6 inches below the ground). The fence will be placed inside the subject property boundary to provide an outside buffer area of undisturbed habitat to relocate any CTS/CRLF captured inside the fence. Stakes must be placed on the inside of the project boundary (side on which work will take place).</li> <li>▪ Cover boards shall be installed every 30 feet on the inside and outside of the exclusion fence for the purpose of capturing adult and juvenile CTS/CRLF and safely relocating them under cover boards or suitable rodent burrows outside of the exclusion fence. This will allow CTS/CRLF relocated outside of the exclusion fence to disperse to aquatic breeding areas or other off-site habitat, but not return to the subject property.</li> <li>▪ Identification of qualified biologists (approved by the USFWS and/or the CDFW) to handle and relocate CTS/CRLF.</li> <li>▪ Captured CTS/CRLF will be relocated outside the exclusion fence (approved by the USFWS and/or CDFW) outside the subject property exclusion fence.</li> <li>▪ Implementation of measures to reduce the risk of spreading harmful pathogens.</li> <li>▪ Development of reporting measures for all captured and relocated CTS/CRLF, including, but not limited to, capture site (i.e., cover board location), sex, age (i.e., adult, juvenile), size, and release site.</li> </ul>	Project applicant/qualified biologist	Prior to issuance of building permits authorizing grading or other construction activities and during construction, including any ground disturbing activities.	County Planning, USFWS and CDFW	Review field survey notes. Verify protocols prior to additional avoidance actions. Review relocation plan prior to implementation.	Once to verify placement of exclusion fencing; ongoing if CTS/CRLF are found on site.

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<ul style="list-style-type: none"> <li>Submittal of a final report to the USFWS and CDFW detailing all captures and relocations of CTS/CRLF.</li> </ul> <p>The listed amphibian relocation plan will be developed in consultation with the USFWS and CDFW and be subject to their approval. The plan will require obtaining an incidental take permit under the California Endangered Species Act (pursuant to Fish and Game Code Section 2081 et seq.) and the federal Endangered Species Act.</p> <p>In addition, the following measures will be implemented during construction:</p> <ul style="list-style-type: none"> <li>A qualified biologist (approved by the USFWS and/or CDFW) will be on-site during initial ground disturbance.</li> <li>All workers shall receive environmental awareness training from the qualified biologist to inform workers of the potential occurrence of listed species, the need to avoid any inadvertent take, and procedures to follow if a CTS or other listed species is encountered.</li> <li>The qualified biologist will have authority to stop work until the qualified biologist can capture and relocate the animal to a safe place off the subject property.</li> <li>To avoid entrapment of animals during construction, pipes or similar structures shall be capped if stored overnight. Construction personnel shall inspect open trenches at the beginning and end of each workday for trapped amphibian individuals. If individuals are found, the individuals shall be relocated by a qualified biologist.</li> <li>Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibians are not trapped. Plastic monofilament netting (erosion control matting), rolled erosion control products, or similar material shall not be used.</li> </ul>					
<p><b>Mitigation Measure BIO-1.2:</b> Even though burrowing owls were not observed on the subject property and there was no evidence (owl pellets, whitewash) of their occurrence, the numerous on-site ground squirrel burrows provide potential nesting and wintering habitat. Burrowing owls are present within 3 miles (closest 0.88 miles) of the subject property and could disperse to the subject property prior to initial ground disturbance for the Project. Conservation Action BUOW-3 in the EACCS recommends mitigation for the loss of burrowing owl nesting habitat (suitable habitat within 0.5 miles of documented nest occurrence during previous 3 years), by protecting habitat in accordance with the mitigation guidelines outlined in Table 3-10 (up to 3.5:1; preserved:impacted). Impacts to burrowing owls and/or</p>	Project applicant/qualified biologist	Four survey visits between February 1 and August 31. Three survey visits, at least three weeks apart between April 15 and July 15. One survey visit, at any time of year, up to 14 days prior to	County Planning Dept.	Review field survey notes. Verify protocols prior to additional avoidance actions.	Subsequent to field surveys.

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<p>their habitat are considered significant. However, the impact would be <i>less than significant</i> with implementation of Mitigation Measure BIO-1.2.</p> <ul style="list-style-type: none"> <li>▪ In accordance with the Staff Report on burrowing owl mitigation,<sup>1</sup> a minimum of four survey visits shall be conducted within the subject property during the burrowing owl breeding season, typically between February 1 and August 31. A minimum of three survey visits, at least three weeks apart, will be conducted during the peak nesting period, between April 15 and July 15, with at least one visit after June 15. If burrowing owls are not found on the subject property during the surveys and there are no documented nest site occurrences within 0.5 miles of the subject property during the previous three years, no compensation for habitat loss will be required.</li> <li>▪ If burrowing owls are found on the site during the surveys, mitigation will be required in accordance with EACCS guidelines. If the surveys identify breeding or wintering burrowing owls on or adjacent to the site, occupied burrows will not be disturbed and will be provided with protective buffers. Buffers shall be a minimum of 150-foot radius around an occupied wintering burrow and a minimum 250-foot radius around a breeding burrow. On-site occupied habitat will be mitigated at a minimum 3:1 ratio (preserved:impacted) consistent with the EACCS. Such mitigation may be conducted by acquiring parcels, through fee title purchase, or conservation easement, where known nesting sites occur or where nesting sites have occurred in the previous three nesting seasons according to EACCS Conservations Actions BUOW-1 and BUOW-2.<sup>2</sup> Offsite preserved mitigation land under this MM BIO-1.2 may be “stacked” with other mitigation obligations identified in this chapter.</li> <li>▪ Take avoidance surveys as described in the Staff Report<sup>3</sup> will be conducted no more than 14 days prior to any ground-disturbing activities (regardless of time of year). A qualified biologist will conduct the survey for burrowing owls. If no owls are found during this first survey, a final survey will be conducted within 24 hours prior to ground disturbance to confirm that burrowing owls are still absent. If ground-disturbing activities are delayed or suspended for more than 14 days after the initial take avoidance survey, the site will be resurveyed (including the final survey within 24 hours of disturbance). All surveys will be conducted in accordance with Staff Report guidelines.</li> </ul>		any ground disturbing activity.			

<sup>1</sup> California Department of Fish and Game, 2012. Staff Report on Burrowing Owl Mitigation, March 7.  
<sup>2</sup> EACCS Section 3.5.3.11 Burrowing Owl.  
<sup>3</sup> California Department of Fish and Game, 2012. Staff Report on Burrowing Owl Mitigation, March 7.

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<p><b>Mitigation Measure BIO-1.3:</b> A qualified botanist shall conduct up to three appropriately timed rare plant surveys during late April and early May to confirm the status of special-status plant species not detectable on the parcel during the October 2017 survey. Exact timing of the surveys will depend on environmental conditions in the year of the survey. The surveys shall focus on the special-status plant species for which suitable habitat occurs on the subject property. The surveys shall be completed, and a report of findings submitted to the County before the onset of initial ground-disturbing activity or construction associated with Project implementation. If special-status plant species are found on the subject property, the plant populations will be avoided by establishing a buffer around the plant populations that will be maintained throughout Project implementation. The buffer shall be determined on a case by case basis and shall be adequate to prevent direct and indirect effects from construction and operation (e.g., dust, changes in hydrology, shading, weed abatement and wildfire fuel modification) on the avoided plant populations and will be determined by a qualified botanist. Project implementation means from the start of ground disturbance until the facility becomes operational. Once operational, avoided plant populations preserved onsite will have permanent avoidance areas established around the preserved plants. A qualified botanist will determine the preserved area with approval from CDFW. The preserved area shall at minimum preserve the plant population and a sufficient portion of its watershed to ensure long term viability of the plants. A Long-term Management Plan shall also define long-term vegetation management activities and performance criteria such as livestock grazing standards (season of use, livestock type, seasonal and residual cover requirements, etc.) required to promote the continued presence of the identified rare plants on the property. The Long-term Management Plan shall be approved by CDFW and Alameda County, and implemented by the operator.</p> <p>If special-status plants are found during the rare plant surveys and avoidance is not feasible, a qualified botanist/biologist or certified range manager will prepare a detailed rare plant mitigation and monitoring plan. The plan will recognize grazing as a management tool and will use grazing regimes to sustain rare plant populations and control of vegetation. The plan shall only be required if a listed species or those with a ranking of 1A, 1B, or 2 of the California Native Plant Society (CNPS) Inventory or locally rare species as listed in the CNPS East Bay database are found during the rare plant surveys. The site will be monitored for 5 years to ensure the continued presence of the special-status plant populations. Rare plant populations will be mapped. Plant populations will be monitored and the population size and number will be recorded. Plant populations shall either be stable or increasing during the</p>	Project applicant, qualified biologist	Between late April and early May, prior to ground disturbing activities. If plants found, then ongoing through construction period. Five year operational monitoring program.	County Planning Dept.	Review field survey notes and review of mitigation program for construction period and operation, if required.	

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<p>monitoring period as compared to pre-project condition. A monitoring report will be prepared and submitted by the end of the year to the County. The plan will include details on seed collection and propagation, techniques to avoid the introduction of plant pathogens to the preserved area, preparing the preserved area for planting, revegetation monitoring plan, success criteria, and reporting requirements. The planting area within the preserved area will be similar in size to the area occupied by the impacted plant on the subject property. After replanting, the preserved area will be monitored for a minimum of five years. Based on standard practices, minimum success criteria would be presence and continued reproductive success of the plant within the preserved area and with less than 80 percent areal coverage of the impacted rare plant at the end of the five-year monitoring period. Annual reports, with interim success criteria to ensure the plan is on track to meet the mitigation goals, will be prepared. At the end of each monitoring year, a report shall be prepared evaluating the success of the mitigation program and recommending remedial measures as necessary. If the success criteria have not been met at the conclusion of the five-year monitoring period, continued monitoring will be conducted until the success criteria have been achieved.</p> <p>1. If the success criteria have not been met at the conclusion of the five-year monitoring period, monitoring may be extended for an additional period or another population of the affected special-status plant species may be preserved. The preserved population shall provide for permanent protection of an existing population in Alameda County, which is equal or larger than that impacted on the parcel (minimum 1:1 replacement). Preservation may occur through land acquisition or use of a conservation easement. Off-site mitigation lands shall include establishment of a management endowment as necessary to provide for long-term management of the preserved population. Offsite preserved mitigation land under MM BIO-1.3 may be “stacked” with other mitigation obligations identified in this chapter.</p>	Project applicant, qualified biologist	Scheduling ground disturbing activities between September 1 and January 31, or preconstruction surveys seven calendar days prior to ground	County Planning Dept.	Review survey reports.	Subsequent to field surveys.
<p><b>Mitigation Measure BIO-1.4:</b> Ground-disturbing and/or vegetation-clearing activities shall be performed in compliance with the MBTA and relevant sections of the CDFG Code to avoid loss of active nests. This shall be accomplished by scheduling ground/vegetation-disturbing activities outside of the bird nesting season (February 1 to August 31) to avoid possible impacts on nesting birds. Alternatively, if ground/vegetation-disturbing activities cannot be scheduled during the non-nesting season (September 1 to January 31), a preconstruction nesting bird survey shall be conducted. The preconstruction nesting survey shall include the following:</p>					

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<ul style="list-style-type: none"> <li>▪ A qualified biologist shall conduct a preconstruction nesting bird (both passerine and raptor) survey within seven calendar days prior to ground-disturbing activities.</li> <li>▪ If no nesting birds or active nests are observed, no further action is required. Ground-disturbing activities shall occur within seven calendar days of the survey.</li> <li>▪ If any active nests are encountered, the qualified biologist shall determine an appropriate disturbance-free buffer zone to be established around the nest location(s) until the young have fledged (or the nest is determined to be inactive). Buffer zones vary depending on the species and the context of the nest location (i.e., typically 25 to 100 feet for passerines and up to 300 feet for raptors) and other factors such as ambient disturbance levels in the vicinity of the nest. If necessary, the dimensions of the buffer zone shall be determined in consultation with the CDFW.</li> <li>▪ Orange construction fencing, flagging, or other marking methods shall be installed to delineate the buffer zone around the nest location(s) within which no construction-related equipment or operations shall be permitted. Continued use of existing facilities such as surface parking and site maintenance may continue within this buffer zone.</li> <li>▪ Construction activities shall be restricted from the buffer zone until the qualified biologist has determined that young birds have fledged (or the nest is inactive) and the buffer zone is no longer needed.</li> </ul> <p>A survey report of findings verifying that any young have fledged (or the nest is inactive) shall be submitted by the qualified biologist for review and approval by the County prior to initiation of any construction activities within the buffer zone. Following written approval by the County construction within the nest-buffer zone may proceed.</p>		disturbing activities.			
<p><b>Mitigation Measure BIO-2:</b> The Project applicant shall realign the proposed perimeter swale to avoid the potential wetlands and provide a 25-foot buffer between the potential wetland and the proposed swale. Prior to the initiation of ground-disturbing activities, temporary orange construction fencing shall be installed around the potential wetland features to prohibit inadvertent damage to the potential wetland features during construction activities. No construction equipment including staging and/or parking or other construction activity shall occur in the buffer zone. After construction is complete the temporary fencing can be removed.</p>	Project applicant, civil engineer	Prior to ground disturbing activities	County Planning Dept.	Field inspection to conform buffer and fencing	Once, prior to construction activities



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<b>CULTURAL RESOURCES</b>					
<p><b>Mitigation Measure CULT-2:</b> If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, representatives from the County and the archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the County shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, proposed Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the subject property outside the 50-foot area while mitigation for historical resources or unique archaeological resources is being carried out.</p>	Project Applicant/ Construction Contractor, consulting archaeologist.	During construction	County Planning Dept.	Plan Review and Approval	As needed if resources are unearthed
<p><b>Mitigation Measure CULT-3:</b> Procedures of conduct following the discovery of human remains have been mandated by Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (CEQA). According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The Alameda County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the owner or the descendent may request mediation by the NAHC.</p>	Project Applicant/ Construction Contractor, consulting archaeologist.	During construction	County Construction Dept.	Verification of remains and appropriate reinterment on site.	County Planning Dept. are unearthed

## **MITIGATION MONITORING AND REPORTING PROGRAM**

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