Attachment 1

Mitigation Monitoring and Reporting Program

Purpose

The purpose of this Mitigation Monitoring and Reporting Program (MMRP) is to ensure that the Alpine Park Project (project) implements the environmental mitigation measures required by the Final Environmental Impact Report (EIR) for the project. Those mitigation measures have been integrated into this MMRP. The MMRP provides a mechanism for monitoring and reporting implementation of the mitigation measures in compliance with the EIR, and general guidelines for the use and implementation of the monitoring program are described below.

This MMRP is written in accordance with California Public Resources Code 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. California Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to adopt a reporting or monitoring program for changes made to the project, or conditions of approval, adopted in order to mitigate or avoid significant effects on the environment and to monitor performance of the mitigation measures included in any environmental document to ensure that implementation takes place. The County of San Diego (County) Department of Parks and Recreation (DPR) is the designated Lead Agency for the MMRP. The Lead Agency is responsible for review of all monitoring reports, enforcement actions, and document disposition. The Lead Agency will rely on information provided by a monitor as accurate and up to date and will field check mitigation measure status as required.

County DPR may modify how it will implement a mitigation measure, as long as the alternative means of implementing the mitigation still achieves the same or greater impact reduction. Copies of the MMRP shall be distributed to the participants of the monitoring effort to ensure that all parties involved have a clear understanding of the mitigation monitoring measures adopted.

Format

Mitigation measures applicable to the project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or requiring supplemental structural controls. Within this document, mitigation measures are organized and referenced by subject category. Each of the mitigation measures has a numerical reference. The following items are identified for each mitigation measure.

- Mitigation Language and Numbering
- Mitigation Timing
- Methods for Monitoring and Reporting
- Responsible Parties

Mitigation Language and Numbering

Provides the language of the mitigation measure in its entirety.

Mitigation Timing

The mitigation measures required for the project will be implemented at various times before construction, during construction, prior to project completion, or during project operation.

Methods for Monitoring and Reporting

The MMRP includes the procedures for documenting and reporting mitigation implementation efforts.

Responsible Parties

For each mitigation measure, the parties responsible for implementation, monitoring and reporting, and verifying successful completion of the mitigation measure are identified.

Table 1. Mitigation, Monitoring, and Reporting Program

Mitigation Measures	Timing and Methods	Responsible Parties
Aesthetics and Visual Resources		
MM-AES-1: Install Screening Fences Along the Active Park Boundary. County DPR or its contractors shall install temporary construction fence screening that is at minimum 8 feet tall. The construction fencing shall extend around the 25-acre active park boundary. The construction fencing shall be installed in phases to block views of construction equipment, materials, and ongoing construction activities, but would not block existing views that are available on the site. In this way the construction fencing would not block the entire 25-acre site at any given time. The construction fencing shall remain as long as construction activities are occurring on the project site.	**Timing:** Prior to and during construction. **Method:** Install construction-screening fencing around the project site prior to the start of construction.	**Implementation:** County DPR or Contractor **Monitoring and Reporting:** County DPR **Verification:** County DPR
MM-AES-2: Maintain Areas of Native Vegetation Along the Project Boundaries. All boundaries of the Alpine Park shall be planted with areas of native vegetation to provide a transition from existing rural fields and native habitat to the landscaping and development of the County Park. Drought-tolerant and native plants shall be located along the eastern and southern boundaries along South Grade Road, on the western boundary along Wright's Field Preserve, and on the northern boundary.	**Timing:** Prior to and during project operation. **Method:** Plant and maintain native vegetation along project boundaries.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR
MM-AES-3: Turn Off Outdoor Lighting 1 Hour After Closing. County DPR shall turn off all outdoor lighting at the parking lots, driveways, and recreational facilities in the active park 1 hour after the park closes, or use motion sensors to limit duration of lighting, except for certain lighting for safety. Outdoor lighting shall be turned on when necessary when the park is open.	**Timing:** During project operation. **Method:** Turn off outdoor lighting 1 hour after the park closes or use motion sensors.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR
Air Quality		
MM-AQ-1: Prepare and Implement a Manure Management Plan. County DPR shall comply with the following best management practices, which will be documented in a Manure Management Plan: • The equestrian areas, including the staging area and horse corrals, shall be cleaned at least once per day including the removal of manure.	**Timing:** Prior to allowing equestrian use. **Method:** Prepare and implement a Manure Management Plan.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
• Any visible manure throughout the equestrian area and surrounding trails shall be removed and placed either in a manure bin, or a vegetated area (compost). • Manure stockpiled in receptacles shall be covered with a lid or tarp. Receptacles shall be located at the farthest feasible distance from nearby residents and/or sensitive receptors. • Equestrian users shall be reminded to pick up after their animals. • Each manure bin shall be checked for capacity, and the surrounding areas will be kept clean and tidy.		
Biological Resources		
MM-BIO-1: Replace Decumbent Goldenbush. To mitigate for significant impacts on decumbent goldenbush, County DPR shall replace at a 3:1 mitigation ratio any affected decumbent goldenbush individuals. Individual plants and/or seeds will be salvaged from the onsite population prior to the start of construction and installed within the open space. Plantings shall be monitored for a minimum of 3 years to ensure the 3:1 mitigation ratio has been met and that the planted individuals have properly established themselves. Seed/material from onsite populations may be contract grown to provide replacement plantings.	**Timing:** Prior to construction. **Method:** Replace any affected decumbent goldenbrush individuals at a 3:1 mitigation ratio and monitor for a minimum of 3 years.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR
MM-BIO-2: Implement Engelmann Oak Avoidance and Minimization Measures. The following measures will minimize and avoid potential impacts on Engelmann oaks resulting from the project: 1. Engelmann oaks within 50 feet of any mass grading shall be entirely fenced around the tree dripline to ensure that no construction activities, including equipment staging, vegetation grubbing, driving, or grading, occur within the tree's dripline. These restrictions shall be communicated to the construction contractor prior to work in this area. 2. To mitigate for any potential significant impacts to Engelmann oak trees, the County will monitor the health of all Engelmann oaks within 200 feet of the proposed Alpine County Park development footprint for 5 years following construction. A certified arborist with experience monitoring oak health will conduct the monitoring. Mortality or serious declines in the health of the Engelmann oaks	**Timing:** Prior to and during construction. **Method:** Implement measures to minimize and avoid impacts on Engelmann oaks.	**Implementation:** County DPR, Biological Monitor **Monitoring and Reporting:** County, Certified Arborist **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
during these 5 years within this area will be mitigated at a 3:1 ratio, should significant impacts occur. Specifically, three Engelmann oaks will be planted for each oak tree that has died or is in serious decline. The mitigation would occur within on-site Engelmann oak woodland areas that will be permanently protected. Planting shall occur within either the Native Habitat Protection Area or within the northwestern portion of the open space. All oak plantings must be certified pathogen free, including for *Phytophthora* species. 3. Any areas within the Engelmann oak root protection zone (i.e., all areas within 50 feet of Engelmann oak canopy) shall be identified on a map that is provided to the construction contractor. Any grading or construction activities within the root protection zone shall be monitored to minimize impacts on oaks to the maximum extent possible. Training shall be provided for the construction contractor by a biological monitor prior to the start of construction activities in this area. This training will detail ways that the construction contractor can reduce impacts as much as possible on Engelmann oaks within the root protection zone. The following avoidance and minimization measures must be implemented: (1) minimizing repetitive travel routes within the root protection zone, (2) restricting any long-term storage of heavy materials within the root protection zone, and (3) restricting work within the root protection zone when the ground is wet to avoid compaction as much as possible after a rain event. Additional avoidance and minimization measures not envisioned here that can be feasibly implemented during construction must be identified and implemented.		
MM-BIO-3: Ensure No Net Loss of Quino Host Plants and Provide Permanent Protection of Quino Habitat. County DPR shall seek a Section 10 Incidental Take Permit (ITP) for impacts on QCB-occupied habitat and comply with any additional mitigation required by the ITP. Regardless of the conservation measures required under the ITP, the County will mitigate for impacts on occupied QCB habitat by providing, at a minimum, on-site preservation of occupied habitat for QCB within the open space and ensure that no net loss of QCB host plants will occur because of the project. County DPR shall ensure that there is no net loss of QCB host plants by performing on-site enhancement and restoration activities within QCB habitat, including	**Timing:** Prior to, during, and after construction. **Method:** Secure a Section 10 ITP and ensure no net loss of QCB host plants by providing on-site preservation of occupied habitat for QCB and performing onsite enhancement and restoration activities.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR, USFWS

Mitigation Measures	Timing and Methods	Responsible Parties
planting dot-seed plantain, removing thatch to support healthy populations of dot-seed plantain, and maintaining and monitoring these enhancement areas for a minimum of 5 years. Construction activities shall not occur until the ITP is secured. Conservation measures shall be implemented pursuant to that ITP and will include measures to restore and enhance QCB habitat and provide permanent habitat protection and maintenance activities within the open space. As part of its ongoing monitoring, the County will demonstrate that QCB persists on the project site at the end of the 5-year restoration and enhancement period. If QCB can no longer be found on either the County's open space or within the adjacent Wright's Field in a normal flight-year at the end of the 5-year restoration period, the County will secure a specific off-site parcel that will contribute meaningfully to the species' long-term conservation.		
MM-BIO-4: Western Spadefoot. The County will mitigate for impacts on one western spadefoot breeding pool, approximately 157 square feet in size, by creating three permanent basins, encompassing a minimum of 471 square feet, to support western spadefoot breeding. These constructed basins will be created within clay soils on the permanently protected lands on the County's parcel, no closer than 100 feet from the western edge of Alpine Park. Basins will be constructed within approximately 262 meters of the core breeding population on Wright's Field to maximize opportunities for western spadefoots on Wright's Field to naturally expand into these newly constructed basins. No basins will be constructed within the areas proposed for QCB habitat enhancement activities. Hydrological analysis will be conducted prior to site selection to map the micro-watersheds in potential sites and ensure the constructed basins fill naturally with rainwater. Basins will be constructed to allow for maximum inundated depths of approximately 18 to 24 inches (20 to 60 centimeters), with the goal that they remain inundated long enough to increase the chances for breeding to be successful during dry years. Conversely, the newly constructed basins shall be designed in such a way that they support standing water for only several weeks following seasonal rains and aquatic predators (e.g., fish, bullfrogs, crayfish) cannot become established.	**Timing:** Prior to, during, and after project construction. **Method:** Develop and implement a Western Spadefoot Habitat Mitigation and Monitoring Plan to mitigate impacts on one western spadefoot breeding pool.	**Implementation:** County DPR **Monitoring and Reporting:** Country DPR **Verification:** CDFW, USFWS

Mitigation Measures	Timing and Methods	Responsible Parties
Because ponding duration is so critical to the success of this effort, additional studies may be needed to estimate infiltration rates, soil profile, depth of clay soil layer, etc. The County will conduct these studies, as needed, to estimate the ponding duration within constructed basins. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing pool(s), as feasible. The County will develop a Western Spadefoot Habitat Mitigation and Monitoring Plan to describe requirements for the constructed basins, how basin sites are chosen, what activities will be conducted during the installation of the new basins, adaptive management, maintenance activities, access controls (e.g., fences), and what monitoring and reporting activities will occur and when. The data for the micro-habitat hydrological analysis will also be presented within this plan. The Western Spadefoot Habitat Mitigation and Monitoring Plan will be provided to the CDFW and USFWS for review and comment. The new basins will be constructed concurrently with Alpine Park, and western spadefoots observed within the project footprint will be relocated to suitable basins outside the project footprint. Monitoring of the newly constructed basins will be conducted during the wet season (approximately December through April) at approximately weekly intervals, beginning with the first significant rain event each year for 5 years following completion of basin construction. The County's biologist will map the spatial extent of the basins, document the inundation depths of the basins and breeding outcomes, and determine if adaptive management is needed to increase survival and recruitment within the constructed basins. Notes will be made if egg masses or larvae are observed. One nocturnal adult survey will also be conducted in each of the 5 years when a breeding event is occurring in order to document the foraging/mobility patterns of western spadefoots in the area of the new basins. The County will also monitor the core breeding population on the Wright's Field Preserve, using the same methods described above (i.e., basin mapping, weekly checks, nocturnal survey) to document the population dynamics of the entire population over time.		

Mitigation Measures	Timing and Methods	Responsible Parties
Monitoring/survey data will be provided to CDFW and USFWS by the monitoring biologist following each monitoring period; a written report summarizing the monitoring results will be provided to CDFW and USFWS at the end of the monitoring effort each year. Success criteria for the monitoring program shall include evidence of a ponding duration that is suitable for western spadefoot reproduction within at least one of the constructed basins during at least one of the 5 years of monitoring. After exclusionary fencing has been installed around all initial proposed ground-disturbing construction, but prior to initiation of initial ground disturbance, the spadefoot biologist will conduct at least three nighttime surveys for spadefoots within the fenced area. Surveys will continue until no more spadefoots are captured and relocated out of the fenced footprint and/or upon the recommendations of the spadefoot biologist. These surveys will be conducted during appropriate climatic conditions and during the appropriate hours (i.e., nighttime, during rain events in breeding season) to maximize the likelihood of encountering spadefoots. If climatic conditions are not highly suitable for spadefoot activity, spadefoot habitat in the project footprint will be watered to encourage aestivating toads to surface. All spadefoots found within the project area will be captured and translocated by the spadefoot biologist to the nearest suitable habitat outside of the work area. Upon completion of these surveys and prior to initiation of construction activities, the spadefoot biologist will report the capture and release locations of all spadefoots found and relocated during these surveys to CDFW and USFWS.		
MM-BIO-5: Avoid and Minimize Impacts on Special-Status Avian Species and Other Birds Protected under the MBTA. To mitigate for potentially significant impacts on sensitive nesting birds and raptors, County DPR shall avoid ground-disturbing activities during the bird breeding season to keep the project in compliance with state and federal regulations regarding nesting birds (i.e., the federal MBTA and California FGC). The bird breeding season is defined as January 15 to September 15, which includes the tree-nesting raptor breeding season of January 15 to July 15, the ground-nesting raptor	**Timing:** Prior to and during project construction. **Method:** Avoid ground-disturbing activities during breeding season (January 15–September 15) or conduct a nesting bird survey and implement nesting bird avoidance measures, as applicable.	**Implementation:** County DPR, Qualified Avian Biologist **Monitoring and Reporting:** County DPR, Qualified Avian Biologist **Verification:** County DPR, CDFW

Mitigation Measures	Timing and Methods	Responsible Parties
breeding season of February 1 to July 15, and the general avian breeding season of February 1 to September 15. If removal cannot be avoided during the bird and/or raptor nesting season, a nesting bird survey shall be conducted no more than 72 hours prior to ground-disturbing activities by a qualified avian biologist within 500 feet of proposed ground- or vegetation-disturbing activities. Biologists will also survey for raptor nests up to 1,500 feet from proposed ground- or vegetation-disturbing activities. This is necessary to definitively ascertain whether raptors or other migratory birds are actively nesting on the project site or in a vicinity that could be indirectly affected by work activities (i.e., through noise or visual disturbances). Special attention will be paid to determining the presence of nesting grassland-endemic bird species, such as grasshopper sparrow, that may be nesting within the dense grasses present within the proposed development footprint. If any active nests are detected, the area shall be flagged and mapped on construction plans, along with a buffer, as recommended by the qualified biologist. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound. The biologist shall determine if alterations to behavior have occurred as a result of human interaction. Buffers may be adjusted, based on observations by the biological monitor of the response of nesting birds to human activity.		
MM-BIO-6: Burrowing Owl Preconstruction Surveys. Prior to initiation of project clearing, grading, grubbing, or other construction activities, pre-construction surveys for the presence of burrowing owl, to verify species absence, will be conducted, including surveying suitable habitat within the project footprint and a 300-foot buffer by a qualified biologist; no grading shall occur within 300 feet of an active burrowing owl burrow. The pre-construction surveys shall follow the take avoidance survey methods outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The first survey shall be conducted within 30 days of initial site disturbance, and the second survey shall occur within 24 hours of initial site disturbance.	**Timing:** Prior to and during project construction. **Method:** Conduct preconstruction surveys, monitor project site for new burrows during grading, and establish avoidance measures as needed to avoid impacts on burrowing owl.	**Implementation:** County DPR **Monitoring and Reporting:** Qualified Biologist, County DPR **Verification:** CDFW and USFWS

Mitigation Measures	Timing and Methods	Responsible Parties
Following the initial pre-grading survey, the project site will be monitored for new burrows each week until grading is complete. Subsequent pre-construction surveys will be required if lapses in the project occur that exceed 72 hours. If present in the project construction footprint or within 300 feet of the project site, coordination with CDFW and USFWS shall occur to establish measures to avoid potential impacts on burrowing owl. Such measures will be decided in coordination with the CDFW and USFWS and follow the "Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County" (Attachment A of the County's Report Format and Content Requirements – Biological Resources). Following the first pre-construction survey within 30 days of initial site disturbance, the qualified biologist will submit a Pre-Grading Survey Report to the County, CDFW, and USFWS within 14 days of the survey and include maps of the project site. If any burrowing owls are observed, the burrowing owl locations on aerial photos and in the format described in the mapping guidelines of the County's Report Format and Content Requirements – Biological Resources will be included. A qualified biologist will attend the pre-construction meeting to inform construction personnel about the burrowing owl requirements.		
MM-BIO-7: **Support Pallid Bat.** County DPR shall work with a bat expert to design and install bat boxes that attract pallid bat prior to vegetation removal activities commencing on the site. These bat boxes should be designed to accommodate both solitary individuals and maternal roost sites. Bat box design should reflect the best practices at the time of installation and be specific to larger-sized bats like pallid bat with respect to roost chamber sizes, etc. Design and placement of bat boxes should also consider how to best maintain proper roost temperature. When possible, the bat boxes should be placed along the edges of the wooded areas on the site. Final design, numbers, and placement of bat boxes will be determined by the bat expert in consultation with County DPR using the best practices known at the time. Monitoring of the bat boxes shall be conducted quarterly for the first 2 years and twice yearly during years 3 through 5 after installation. Any problems that are noted (e.g., mortality, predation) shall be	**Timing:** Prior to vegetation removal activities. **Method:** Design, install, and monitor bat boxes to attract pallid bat.	**Implementation:** County DPR; Bat Expert **Monitoring and Reporting:** County DPR; Bat Expert or designee **Verification:** CDFW

Mitigation Measures	Timing and Methods	Responsible Parties
addressed in consultation with the bat expert. Occupancy status, including species, numbers, etc., shall be documented to the extent possible without disturbing the occupants. If, after the first 2 years, a bat box remains unoccupied by any bat species, County DPR and bat expert will discuss if the bat box needs to be repositioned on the site or redesigned. An annual report shall be prepared by the bat expert or designee to document the findings of the monitoring visits. The County will provide copies of this annual report to the CDFW and also include updates on the bat box monitoring on the site in the County's annual report for the MSCP.		
MM-BIO-8: Bat Roost Avoidance. Because of the difficulty in detecting all potentially occurring roosting bats (e.g., the western red bat within the Engelmann oaks, pallid bats within rock crevices), no construction activities that could disturb a maternal roost site will occur during the pupping season (typically April 1 through August 31). This measure specifically precludes high-frequency surveying as well as intensive noise-generating activities (e.g., jack-hammering, etc.) anywhere on the project construction footprint as well as a 200-foot buffer around the project construction footprint during the pupping season. If construction activities must occur during the pupping season, the County will conduct definitive bat roost surveys to determine the presence or absence of maternal day-roost and/or night-roost locations. These surveys will be conducted throughout the entirety of the project construction footprint as well as a 400-foot buffer around the project construction footprint. The bat biologist(s) who conduct these surveys shall have the appropriate education, training, and experience. The bat roost survey methodology will be described in a Bat Roost Management, Monitoring, and Mitigation Plan, which will be prepared at least 30 days prior to the start of construction and provided to CDFW. Bat roost survey methods may include mist netting and tracking individual bats using telemetry and/or additional acoustic surveys that are timed to determine if individual Engelmann oaks or rock outcrops on or within 400 feet of the project construction footprint support bat roost sites. Surveys will be conducted for at least one	**Timing:** Prior to, during, and after project construction. **Method:** Avoid construction activities that could disturb maternal roost sites during pupping season (typically April 1–August 31) or implement appropriate avoidance measures established in the Bat Roost Management, Monitoring, and Mitigation Plan.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR, Bat Biologist **Verification:** CDFW

Mitigation Measures	Timing and Methods	Responsible Parties
hour after sunset to monitor for emergence. If any maternal roost sites are identified, an appropriate construction avoidance buffer of at least 200 feet shall be established around that roost site in accordance with the requirements established in the Bat Roost Management, Monitoring, and Mitigation Plan. Avoidance buffer distances will account for the ability of that individual bat species to tolerate specific types of low- and high-frequency construction noise and other human disturbance associated with the project. No construction activities that could disrupt the roost site will be permitted within the established construction avoidance buffer. Additionally, any roost identified during the bat roost survey will have at least a 400-foot buffer from light sources without shields and at least a 250-foot buffer from any stationary exhaust source present for more than two minutes. Bat biologists will monitor construction activities occurring adjacent to the avoidance areas for the bat roost sites in accordance with the Bat Roost Management, Monitoring, and Mitigation Plan. Monitoring frequency and duration also will conform to the Bat Roost Management, Monitoring, and Mitigation Plan and be used to determine that the established bat roost avoidance buffers are large enough to prevent maternal roost site impacts, including, but not limited to, roost site abandonment. Avoidance buffers will be expanded if any stress or disturbance to the maternal roost site is observed during monitoring. In years 1, 3, and 5 following construction completion, the County will conduct bat surveys, including maternal bat roost surveys, within the areas originally surveyed prior to construction. If the maternal bat roost sites previously observed prior to and during construction are still observed during these monitoring surveys, no additional mitigation will be required. If any maternal roost sites observed prior to or during construction are no longer present (i.e., are not observed in any of the three post-construction surveys), the County will mitigate for the loss of the maternal roost site at a 2:1 ratio using methods agreed upon in the Bat Roost Management, Monitoring, and Mitigation Plan. This may include planting additional Engelmann oaks within the proposed open space		

Mitigation Measures	Timing and Methods	Responsible Parties
if the affected maternal roost site utilized Engelmann oak trees or by building artificial bat roosts specifically for the affected bat species.		
MM-BIO-9: Provide Compensatory Habitat-Based Mitigation. To mitigate for potentially significant impacts on Tier I, Tier II, and Tier III habitats, the County will provide compensatory mitigation consistent with its BMO mitigation ratios. Mitigation will be provided commensurate with the acres of impacts incurred during each phase of construction and will be provided through the following: 1) on-site preservation within the open space, 2) on-site restoration of non-native grassland (Tier III) to native grassland (Tier 1) and 3) off-site restoration of non-native (Tier III) to native grassland (Tier 1) within Wright's Field, anticipated only as a result of Phase 2 implementation and 4) off-site mitigation for non-native grasslands, anticipated only as a result of Phase 2 implementation. Table 4.4-5 summarizes the maximum mitigation requirements if both Phase 1 and Phase 2 are implemented.	**Timing:** Prior to construction. **Method:** Provide compensatory habitat-based mitigation to reduce significant impacts on sensitive vegetation communities.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR

Table 4.4-5. Maximum Mitigation Requirements

Tier[a]	Total Impacts	Mitigation Ratio	Maximum Mitigation Requirement	On-site Mitigation[b]	Off-site Mitigation (Phase 2 only)
Tier I	14.86	2:1	29.73	17.48 acres of preservation plus 4.84 acres of restoration (see **MM-BIO-10**)	7.41 acres of restoration in Wright's Field Preserve (see **MM-BIO-10**)
Tier II	3.97	1.5:1	5.95	5.95	None
Tier III	3.57	1:1	3.57	None	3.57[b]

a. Tiers correspond to those described in the County's BMO.

b. Habitat-based mitigation for permanent direct impacts on non-native grassland during Phase 2 implementation will be satisfied through purchase of credits and/or land acquisition of a similar high-quality non-native grassland in an off-site location.

Mitigation Measures	Timing and Methods	Responsible Parties
MM-BIO-10: Native Grassland Mitigation. Impacts on 14.79 acres of Valley needlegrass grassland will be mitigated at a 2:1 ratio through preservation of 10.60 acres of Valley needlegrass grassland and 6.88 acres of open Engelmann oak woodland on-site, in addition to 4.84 acres of restoration of non-native grassland to Valley needlegrass grassland within the County's parcel and 7.41 acres of restoration on Wright's Field Preserve. All restoration will be in accordance with a Habitat Restoration and Enhancement Plan (HREP) approved by the Wildlife Agencies (USFWS and CDFW). Success criteria established in that HREP will include achieving at least a 5 percent absolute cover of purple needlegrass within restoration areas while retaining cover and species composition similar to that of the native forbs currently present within non-native grassland areas on-site. If restoration does not meet the restoration goals, the County will implement adaptive management measures, to be approved by the Wildlife Agencies.	**Timing:** Prior to construction. **Method:** Mitigate impacts on Valley needlegrass grassland through preservation and restoration.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** USFWS and CDFW
APM-BIO-1: Establishment of the Open Space Preserve. As required under the County's MSCP Subarea Plan, Alpine Park Preserve will be managed in perpetuity in accordance with an RMP. This plan will outline management activities to be carried out by the County. The activities that are likely to be included in the RMP would enhance and preserve the affected sensitive natural communities. These activities include long-term monitoring of on-site preservation areas, non-native and invasive species vegetation management, and habitat restoration in the open space, as applicable. Through these strategic measures to mitigate for impacts, the preserved sensitive natural communities will be managed to maintain high-quality and functioning habitat and County DPR will demonstrate its long-term commitment to species conservation within the open space.	**Timing:** Prior to opening the trails to the public. **Method:** Establish and manage the Alpine Park Preserve in accordance with the RMP.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR Park Rangers and Personnel **Verification:** County DPR
Cultural Resources		
MM-CUL-1: Prepare and Implement a Cultural Resources Monitoring and Discovery Plan. Prior to the commencement of any ground-disturbing activities within previously undisturbed soils within the project area, County DPR shall retain a qualified archaeologist (pre-approved by County DPR) who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations [CFR], Part 61) to prepare a Cultural	**Timing:** Prior to ground-disturbing activities within previously undisturbed soils. **Method:** Retain a qualified archaeologist to prepare and implement a Cultural Resources Monitoring and Discovery Plan.	**Implementation:** Qualified Archaeologist retained by County DPR **Monitoring and Reporting:** Qualified Archaeologist retained by County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
Resources Monitoring and Discovery Plan (CRMDP) for the project area. Procedures to follow in the event of an unanticipated discovery apply to all project components. The CRMDP shall be submitted to County DPR, as applicable based on the jurisdiction wherein the project component is located, and shall be reviewed and approved by County DPR, the relevant agency. If County DPR does not have in-house expertise to review the CRMDP, they shall respectively hire an expert who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR 61) and County DPR shall pay for said expert prior to the commencement of any ground-disturbing activities within the areas requiring archaeological monitoring. County DPR's CRMDP review shall ensure that appropriate procedures to monitor construction and treat unanticipated discoveries are in place. County DPR's review and approval of the CRMDP shall occur prior to the commencement of any construction activities subject to the requirements of the CRMDP. The CRMDP shall include required qualifications for archaeological monitors and supervising archaeologists and shall lay out protocols to be followed in relation to cultural resources, including both archaeological and tribal cultural resources. The CRMDP shall provide a summary of sensitivity for buried cultural resources. In addition, it shall describe the roles and responsibilities of archaeological and Native American monitors, County DPR, and construction personnel. The CRMDP shall describe specific field procedures to be followed for archaeological monitoring, including field protocol and methods to be followed should there be an unanticipated archaeological discovery. Evaluation of resources, consultation with Native American individuals, tribes and organizations, treatment of cultural remains and artifacts, curation, and reporting requirements shall also be described. The CRMDP shall also delineate the requirements, procedures, and notification processes in the event that unanticipated human remains are encountered. The CRMDP shall delineate the area(s) that require archaeological monitoring. Mapping of the area(s) shall be made available to County DPR, who shall incorporate this information into the respective construction specifications for the project.		**Verification:** County DPR or Expert who meets the Secretary of the Interior's Professional Qualification Standards

Mitigation Measures	Timing and Methods	Responsible Parties
MM-CUL-2: Prepare and Implement a Cultural Resources Awareness Training Prior to Project Construction. Prior to, and for the duration of, project-related ground disturbance County DPR shall hire a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61) and approved by County DPR to provide cultural resources awareness training to project construction personnel. The training shall include a discussion of applicable laws and penalties under the law; samples or visual representations of artifacts that might be found in the project vicinity; and the steps that must be taken if cultural resources are encountered during construction, including the authority of archaeological monitors, if required to be on site during the project, to halt construction in the area of a discovery. The cultural resources awareness training shall be conducted by a qualified archaeologist. A hard copy summary of cultural resources laws, discovery procedures, and contact information shall be provided to all construction workers. Completion of the training shall be documented for all construction personnel, who shall be required to sign a form confirming they have completed the training. The form shall be retained by County DPR to demonstrate compliance with this mitigation measure.	**Timing:** Prior to and during ground-disturbing activities. **Method:** Retain a qualified archaeologist to provide cultural resources awareness training to project construction personnel.	**Implementation:** Qualified Archaeologist retained by County DPR **Monitoring and Reporting:** Qualified Archaeologist retained by County DPR **Verification:** County DPR
MM-CUL-3: Conduct Archaeological and Native American Monitoring. An archaeological monitor or cross-trained archaeological/paleontological monitor and a Native American monitor shall be retained to observe all initial ground-disturbing activities, including brush clearance, vegetation removal, grubbing, grading, and excavation. The archaeological monitor shall meet the qualification standards of the California Office of Historic Preservation and shall be overseen by an archaeological principal investigator. The Native American monitor shall be selected from among the Native American groups identified by the NAHC as having affiliation with the project area. Prior to the start of ground-disturbing activities, the archaeological monitor shall conduct paleontological and cultural resources sensitivity training for all construction personnel. The Native American monitor or a representative shall be given the opportunity to participate. Construction personnel shall be informed of the types of	**Timing:** Prior to and during ground disturbance activities. **Method:** Provide cultural resources awareness training to project construction personnel by an approved qualified archaeologist.	**Implementation:** Qualified Archaeological Monitor or cross-trained Archaeological/ Paleontological Monitor and a Native American Monitor Retained by County DPR **Monitoring and Reporting:** Qualified Archaeological Monitor or cross-trained Archaeological/ Paleontological Monitor and a Native American Monitor Retained by County DPR **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
paleontological or archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of fossils, archaeological resources, or human remains. County DPR shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance. Archaeological monitoring shall be conducted by an archaeologist familiar with the types of archaeological resources that could be encountered within the project site and, if possible, who is cross-trained in paleontological resource identification. The qualified archaeologist, in coordination with County DPR and Native American monitor, may reduce or discontinue monitoring if it is determined that the possibility of encountering buried archaeological deposits is low based on observations of soil stratigraphy or other factors. Both the archaeologist and Native American monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist or paleontologist has evaluated the discovery and determined appropriate treatment. If prehistoric archaeological materials are encountered, the Native American monitor shall participate in any discussions involving treatment and subsequent mitigation. The archaeological monitor shall keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to County DPR and any Native American groups who request a copy. A copy of the final report shall be filed at the SCIC. Monitoring actions and procedures shall be completed per the CRMDP described in MM-CUL-1.		
Geology and Soils		
MM-GEO-1: Implement a Paleontological Resource Mitigation Program. Ground-disturbing construction activities in the southern and western portion of the project site shall be subject to paleontological and geologic resource sensitivity screening prior to commencement of construction. The resource sensitivity screening shall determine which ground-disturbing activities would be deep enough to encounter previously undisturbed deposits of the Lusardi	**Timing:** Prior to construction and during ground-disturbing activities. **Method:** Implement a paleontological resource mitigation program.	**Implementation:** Qualified Paleontological Monitor or Cross-trained Paleontological/ Archaeological Monitor, and Qualified Paleontologist retained by County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
Formation. County DPR shall retain a Qualified Paleontologist who shall oversee paleontological monitoring by a qualified Paleontological Monitor or cross-trained Paleontological/ Archaeological monitor during ground-disturbing activities. The paleontological monitoring shall include the following measures: • A Qualified Paleontologist shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. • A Qualified Paleontologist or Paleontological Monitor or cross-trained Paleontological/Archaeological Monitor shall be on site, on a full-time basis, during ground-disturbing activities that occur 10 feet or more below ground surface, to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the project's Qualified Paleontologist. A "Paleontological Monitor" shall be defined as an individual selected by the Qualified Paleontologist who has experience in monitoring excavation and the collection and salvage of fossil materials. • If fossils are discovered on the project site, the Qualified Paleontologist shall recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains. • The Qualified Paleontologist shall be responsible for the cleaning, repairing, sorting and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation. • The Qualified Paleontologist shall deposit and donate prepared fossils, along with copies of all pertinent field notes, photos, and maps, in a scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum, approved by County DPR. • Within 30 days after the completion of excavation and pile-driving activities, a final data recovery report shall be completed by the Qualified Paleontologist and submitted to County DPR for review and approval. The final report shall document the results of the mitigation and shall include discussions of the methods		**Monitoring and Reporting:** Qualified Paleontological Monitor or Cross-trained Paleontological/ Archaeological Monitor, and Qualified Paleontologist retained by County DPR **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.		
Greenhouse Gas Emissions and Climate Change		
MM-GHG-1: Implement Construction Best Management Practices. The County shall ensure implementation of the following measures during project construction: • Require equipment to be maintained in good tune and to reduce excessive idling time. • Utilize alternative fueled equipment and vehicles, such as renewable diesel, renewable natural gas, compressed natural gas, or electric. • Require older equipment be retrofitted with advanced engine controls, such as diesel particulate filters, selective catalytic reduction, or cooled exhaust gas recirculation.	**Timing:** During project construction. **Method:** Implement construction best management practices to limit GHG emissions.	**Implementation:** County DPR General Contractor **Monitoring and Reporting:** County DPR **Verification:** County DPR
Hazards and Hazardous Materials		
MM-HAZ-1: Prepare and Implement a Soil Management Plan. Prior to the commencement of soil-disturbing construction activities, the County will retain a licensed professional geologist, professional engineering geologist, or professional engineer with experience in contaminated site redevelopment and restoration to prepare and submit a soil and groundwater management plan to the County for review and approval. After the County's review and approval, the County will implement the soil and groundwater management plan, to include the following: • *A Site Contamination Characterization Report* (Characterization Report) delineating the vertical and lateral extent and concentration of residual contamination from the site's past uses in areas where soil would be disturbed. The Characterization Report will include a compilation of data, based on a historical records review and prior reports and investigations, and, where data gaps are found, new soil and groundwater sampling to characterize the existing vertical and lateral extent and concentration of residual contamination. • *A Soil Testing and Profiling Plan* (Testing and Profiling Plan) for materials that will be disposed of during construction. All	**Timing:** Prior to soil-disturbing construction activities. **Method:** Prepare and submit a Soil and Groundwater Management Plan to evaluate, test, handle, and dispose of soil and groundwater properly.	**Implementation:** Licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer retained by County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
potential contaminants of concern will be tested, including CCR Title 22 metals, polycyclic aromatic hydrocarbons, volatile organic compounds, herbicides, pesticides, polychlorinated biphenyls, or any other potential contaminants, as specified within the Testing and Profiling Plan. The Testing and Profiling Plan will document compliance with CCR Title 22 for proper identification and segregation of hazardous and solid waste as needed for acceptance at a CCR Title 22-compliant off-site disposal facility. All excavation activities will be actively monitored by a registered environmental assessor for the potential presence of contaminated soils and compliance with the Testing and Profiling Plan. • *A Soil Disposal Plan* (Disposal Plan), which will describe the process for excavation, stockpiling, dewatering, treating, loading, and hauling of soil from the site. This plan will be prepared in accordance with the Testing and Profiling Plan (i.e., in accordance with CCR Title 22, CCR Title 27, DOT Title 40 CFR Part 263), and current industry best practices for the prevention of cross-contamination, spills, or releases. Measures will include, but not be limited to, segregation into separate piles for waste profile analysis based on organic vapor and visual and odor monitoring. • A *Site Worker Health and Safety Plan* (Safety Plan) to ensure compliance with 29 CFR Part 120, Hazardous Waste Operations and Emergency Response, regulations for site workers at uncontrolled hazardous waste sites. The Safety Plan will be based on the characterization report and the planned site construction activity to ensure that site workers who are potentially exposed to contamination in soil are trained, equipped, and monitored during site activities. Training, equipment, and monitoring activities will ensure that workers will not be exposed to contaminants above personnel exposure limits established by Table Z, 29 CFR Part 1910.1000. The Safety Plan will be signed by and implemented under the oversight of a state certified industrial hygienist		

Mitigation Measures	Timing and Methods	Responsible Parties
Noise and Vibration		
MM-NOI-1: Install Temporary Sound Barriers. Prior to and during construction activities for the proposed sewer line extension, the construction contractor shall install temporary sound barriers that break the line of sight (a minimum of 10 feet) between construction equipment and noise-sensitive receivers. These soundwalls shall be installed at any location where construction is located within 100 feet of the property line of an occupied residence or other noise-sensitive land use, such as schools.	**Timing:** Prior to and during construction for the proposed sewer line extension. **Method:** Install temporary sound barriers between construction equipment and noise-sensitive receivers.	**Implementation:** Construction Contractor **Monitoring and Reporting:** County DPR **Verification:** County DPR
MM-NOI-2: Enforce Standard Rules and Regulations. County DPR shall enforce all applicable standard rules and regulations for DPR facilities including, but not limited to, the following: • Quiet Hours are from 10:00 p.m. to 7:00 a.m. • Dogs must be licensed and restrained on a leash not longer than 6 feet and attended at all times. (Leash restriction will not apply to dogs within the designated dog park space.) • No person shall disturb the peace and quiet of a County park by any loud or unusual noise, or by the sounding of automobile horns or noise-making devices, or by the use of profane, obscene, or abusive language or gestures. • No person shall use, transport, carry, fire, or discharge any fireworks, firearm, weapon, air gun, archery device, slingshot, or explosive of any kind across, in, or into a County Park. • The applicable requirements of DPR Policy Number C-06, Noise Regulation in County Parks will be enforced.	**Timing:** During project operation. **Method:** Comply with standard noise rules and regulations for DPR facilities.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR
MM-NOI-3: Set Operational Limits and Restrictions. Except for occasional special events conducted pursuant to a specific permit (conditional use permit, special event permit, etc.), enforce the following operational restrictions: • Prohibit the use of noise-generating equipment (noise-makers, bullhorns, air horns, amplified stereos/radios, etc.) by spectators. The only exception is for official use of the announcer's PA systems or other devices required for proper operation of the intended and approved activities. • End all onsite events no later than 10:00 p.m.	**Timing:** During project operation. **Method:** Comply with operational limits and restrictions.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR **Verification:** County DPR

Mitigation Measures	Timing and Methods	Responsible Parties
Tribal Cultural Resources		
MM-TCR-1: Conduct Native American Monitoring. A Kumeyaay Native American monitor shall be present at all areas of proposed ground disturbance during all ground disturbance. Native American monitors would be retained from tribes who have expressed an interest in the project and have participated in discussions with County DPR. If a tribe has been notified of scheduled construction work and does not respond, or if a Native American monitor is not available, work may continue without the Native American monitor. Roles and responsibilities of the Native American monitors shall be detailed in the Cultural Resources Monitoring and Discovery Plan described in MM-CUL-1. Costs associated with Native American monitoring shall be borne by County DPR.	**Timing:** Prior to and during construction. **Method:** Retain a Native American monitor to conduct monitoring during ground-disturbing construction activities as described in the Cultural Resources Monitoring and Discovery Plan.	**Implementation:** Qualified Native American Monitor retained by County DPR **Monitoring and Reporting:** Qualified Native American Monitor retained by County DPR **Verification:** County DPR
Utilities and Service Systems		
MM-UTIL-1: Complete Water Study to Assess Water Infrastructure Capacity. Prior to issuance of a building permit, County DPR shall coordinate with PDMWD to assess the capacity of existing water infrastructure that would serve the project site and, if it is determined that insufficient capacity exists to serve the project, the project proponent shall implement the necessary improvements prior to operation of the project, as determined by PDMWD. Should it be determined that the project would result in the need for new or expanded water facilities, the project proponent shall analyze the potential environmental effects of the improvements in accordance with CEQA.	**Timing:** Prior to issuance of a building permit. **Method:** Complete water study to assess the capacity of existing water infrastructure and implement necessary improvements, as necessary.	**Implementation:** County DPR **Monitoring and Reporting:** County DPR, PDMWD **Verification:** PDMWD
MM-UTIL-2: **Confirm Water Supply Availability for Development of the Project Prior to Issuance of Building Permits.** Water availability shall be confirmed prior to issuance of building permits. The confirmation of water availability by PDMWD shall be provided in written form by PDMWD.	**Timing:** Prior to issuance of a building permit. **Method:** Confirm water supply availability for development of the project.	**Implementation:** County DPR **Monitoring and Reporting:** PDMWD **Verification:** PDMWD