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In Reply Refer To:
FWS/CDFW-WRIV-2024-0019889

December 4, 2023
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Governor's Office of Planning & Research

Dec 05 2023

STATE CLEARINGHOUSE

Mr. Jim Pechous
Principal Planner
8930 Limonite Avenue
Jurupa Valley, CA 92509
jpechous@jurupavalley.org

Subject: Draft Environmental Impact Report, Rio Vista Specific Plan Project, State Clearinghouse No. 2018121005, City of Jurupa Valley

Dear Mr. Pechous:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (CDFW), hereafter referred to jointly as the Wildlife Agencies, received a Draft Environmental Impact Report (EIR) from the City of Jurupa Valley (City) for the Rio Vista Specific Plan Project (Project) of Richland Communities (Project Applicant/Proponent) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines[1]. The Wildlife Agencies appreciate the opportunity to provide comments and recommendations regarding Project activities that may affect public trust resources.

WILDLIFE AGENCIES' ROLES

The primary concern and mandate of the Service is the protection of fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.) (FESA). CDFW is a trustee agency under the California Environmental Quality Act (CEQA) and is responsible for ensuring appropriate conservation of fish and wildlife resources including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act, and administers the Natural Communities Conservation Planning Program (NCCP).

The Service issued a FESA section 10(a)(1)(B) permit to the City for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) on June 22, 2004. CDFW also issued NCCP Approval and Take Authorizations to the City for the MSHCP as per Section 2800

1 CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

et seq., of the California Fish and Game Code (FGC). The MSHCP established conservation programs to minimize and mitigate habitat loss and the incidental take of covered species in association with future development activities covered by the USFWS and CDFW take permits. The City of Jurupa Valley is an MSHCP Permittee. The Wildlife Agencies request that the City's implementation of the MSHCP for this Project be addressed in the EIR as discussed below.

PROJECT DESCRIPTION AND SUMMARY

Description: The City of Jurupa Valley (City; Lead Agency) and (Project Applicant) are proposing the Rio Vista Specific Plan Project (Project). The proposed Project will construct 1,697 residential dwelling units on 204.4 acres, a Light Industrial and Business Park on 140.3 acres, additional public facilities (including a school and water tanks) on 140.3 acres, 19.6 acres of roads, 18.4 acres of parks and trails, and 9.0 acres for water basins on the 917.3-acre Project site. Approximately 510.8 acres of the Project site will be designated as Open Space.

Location: The Project site is located north of State Route (SR) 60, between Armstrong Road and Rubidoux Boulevard on approximately 917.3 acres in the City of Jurupa Valley, Riverside County, California, in Sections 4 and 9, Township 2 South, Range 5 West U.S. Geological Survey (USGS) Fontana, 7.5-minute topographic quadrangle, California topographic quadrangle map; Assessor's Parcel Numbers 175-080-010 and -021,175-090-001, -002, -003, -004, and -005, 175-100-003, -005, and -006, 175-150-002, 175-160-001 and -005, 177-030-012 and -0014, and 177-040-002 and -008.

COMMENTS AND RECOMMENDATIONS

Based on the EIR documents made available by the City for review, the Wildlife Agencies offer the comments and recommendations below to assist the City in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions are also included to improve the environmental document. CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring, and reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097).

Western Riverside County Multiple Species Habitat Conservation Plan

Compliance with approved habitat plans, such as the MSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the CEQA Guidelines requires that the CEQA document discuss any inconsistencies between a proposed project and applicable general plans and regional plans, including habitat conservation plans and natural community conservation plans. An assessment of the impacts to the MSHCP as a result of this Project is necessary to address CEQA requirements.

The proposed Project occurs within the MSHCP Plan Area and is subject to the provisions and policies of the MSHCP. To be considered a covered activity, Permittees need to demonstrate that proposed actions are consistent with the MSHCP, the associated USFWS and CDFW take Permits issued to the City of Jurupa Valley, and the MSHCP Implementing Agreement signed by

the City and the Wildlife Agencies. The City is the Lead Agency and is signatory to the Implementing Agreement of the MSHCP. To demonstrate consistency with the MSHCP, as part of the CEQA review, the City should ensure the Project pays the MSHCP's Local Development Mitigation Fees and other relevant fees as set forth in Section 8.5 of the MSHCP; and demonstrates compliance with: 1) the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2 of the MSHCP); 2) the Protection of Narrow Endemic Plant Species (Section 6.1.3 of the MSHCP); 3) the Urban/Wildlands Interface Guidelines (Section 6.1.4 of the MSHCP); 4) the Additional Survey Needs and Procedures, specifically the policies set forth for burrowing owl (*Athene cunicularia*) (Section 6.3.2of the MSHCP); and 5) the Best Management Practices and the siting, construction, design, operation and maintenance guidelines as set forth in Section 7.0 and Appendix C of the MSHCP.

Specific Comments

Comment #1: Protection of Riparian/Riverine and Vernal Pool Resources (MSHCP Section 6.1.2)

The procedures described in the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools section of the MSHCP Plan (MSHCP Section 6.1.2) are to ensure that the biological functions and values of these areas are maintained throughout the MSHCP Plan Area (including all areas of the Plan located outside the Criteria Area). Additionally, this process helps identify areas to consider for priority acquisition, as well as those functions that may affect downstream values related to Conservation of Covered Species within the MSHCP Conservation Area. The assessment of riparian/riverine and vernal pool resources may be completed as part of the CEQA review process as set forth in Article V of the State CEQA Guidelines. However, the MSHCP identifies that the U.S. Fish and Wildlife Service and CDFW shall be notified in advance of approval of public or private projects of draft determinations for the biologically equivalent or superior determination findings associated with the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools policies presented in Section 6.1.2 of the MSHCP (MSHCP Section 6.11). As required by the MSHCP Plan, its Implementation Agreement, and the City's associated take permits from USFWS and CDFW, completion of the DBESP process prior to adoption of the environmental document helps to ensure that the Project will be consistent with the MSHCP Plan, and provides public disclosure and transparency during the CEQA process by identifying the Project impacts and mitigation for wetland habitats and species, a requirement of CEQA Guidelines, §§ 15071, subds.(a)-(e).

The MSHCP identifies that assessment of these areas include identification and mapping of riparian/riverine areas and vernal pools. The assessment shall consider species composition, topography/ hydrology, and soil analysis, where appropriate. The documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species identified in Section 6.1.2 of the MSHCP. Factors to be considered include hydrologic regime, flood storage and flood-flow modification, nutrient retention and transformation, sediment trapping and transport, toxicant trapping, public use, wildlife Habitat, and aquatic Habitat.

The MSHCP identifies that for mapped riparian/riverine and vernal pool resources that are not included in the MSHCP conservation area, applicable mitigation under CEQA, shall be imposed

by the Permittee (in this case the Lead Agency). Furthermore, the MSHCP identifies that to ensure the standards in Section 6.1.2 are met, the Permittee shall ensure that, through the CEQA process, project applicants develop project alternatives demonstrating efforts that first avoid, and then minimize direct and indirect effects to the wetlands mapped pursuant to Section 6.1.2. If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to riparian/riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigated such that the lost functions and values as they relate to Covered Species are replaced as through the Determination of Biologically Equivalent or Superior Preservation (DBESP) process.

The City is required to ensure the Applicant completes the DBESP process prior to completion of the EIR to demonstrate implementation of MSHCP requirements in the CEQA documentation. The Wildlife Agencies appreciate the analysis of impacts provided within the EIR and its General Biological Resource Assessment. However, the MSHCP implementation process is not complete, because a DBESP has not been prepared and submitted to the Wildlife Agencies for review and response for us to determine if the mitigation proposed for the impacts to riparian/riverine resources is biologically equivalent or superior preservation to avoidance. It is not appropriate for the City to adopt the EIR until the DBESP is complete because the City is required to notify the Wildlife Agencies in advance of approval of public and private projects for identified MSHCP activities, such as completion of the DBESP for the riparian/riverine policy (Section 6.11 of the MSHCP).

The Wildlife Agencies request that the City of Jurupa Valley complete the DBESP process, and once the DBESP is complete, then update the EIR with the riparian/riverine mitigation measures identified in the DBESP. This process would demonstrate the Project's consistency with and the City's implementation of the MSHCP.

Comment #2: Impacts to the Jurupa Valley Palmer Oak

Issue: The Project may have a significant impact on the Jurupa Valley Palmer oak (*Quercus palmeri*) of unique biological, regional, and global significance.

Specific Impacts: Project activities, such as grading, cutting, or trenching, could potentially impact the Jurupa Valley Palmer oak through damage from soil compaction, severing of roots, trunk and limb injury, and limb breakage from construction equipment and activities. There is a high potential for indirect permanent impacts by the installation of houses, other buildings, paved surfaces within the vicinity of the oak. Additionally, grading might divert water percolation which currently nourishes the oak's outer root system away from the root system, resulting in a decrease in moisture availability to this prehistoric oak.

Why Impacts Would Occur: The EIR identifies that the unique Jurupa Valley Palmer oak, represented by approximately 70 stem clusters forming a dense and homogeneous thicket with dimensions of approximately 25×8 meters and limited to roughly one meter in height, is located on a mountaintop ridge on the Project site. The EIR states that "no project-related construction activities may occur within the tree's mapped limit and the 200-foot buffer". The DEIR indicates that construction activities may occur within 200 to 259 feet of the Jurupa Valley Palmer oak.

This has a high potential to fundamentally alter the surrounding environment as well as indirect effects through alterations to decomposition and nutrient cycling, access to water, as well as the abundance of herbivores, pathogens, pollinators, and seed dispersers.

Heavy equipment, storage of supplies and materials, and work activities within or near a tree's dripline (i.e. directly below the canopy) can cause the soil within the root zone to compress and can often limit the availability of air, water, and nutrients to the roots. Soil compaction is greatly increased following an event such as rain or irrigation, when wet or moist soil is compressed by equipment or foot traffic (NPS 2022). Compacted soil is extremely difficult to remedy and can lead to the decline and/or death of a tree. In addition, trucks and other large equipment that strike tree limbs can cause breakage. The loss of limbs through breakage results in two principle impacts to trees: reduced capacity to capture sunlight for photosynthesis through lost foliage, and the opening of branch wounds that expose the tree to damaging insects and diseases. While the loss of smaller limbs and branches may only cause a minimal set-back in the health and vitality of a tree, breakage and/or loss of particularly large limbs can result in tree decline and death.

The Project's proposal to impact the drainages onsite could result in moisture stress as grade changes may potentially lower the water table or divert drainage patterns away from the site. Any changes to the microtopography surrounding the Jurupa Valley Palmer oak could potentially be detrimental to the long-term survival of this individual oak. No studies have been conducted to determine the water source for this tree; it is unknown if the Jurupa Valley Palmer oak is sourcing water (1) from surface flow that will be diverted away from the oak under the proposed Project activities, or if the oak is (2) relying on groundwater resources that may be impacted by grading and Project development, or if the oak (3) is partially sustained by fog drip from fog flowing slowly against the thicket's leaves and stems. Based on our knowledge of the local area, we suspect that fog events on that ridge-top likely happen most often in the Spring months, and secondarily on Winter nights. The harvesting of fog-water during the Spring months may be an important component of the Jurupa Valley Palmer oak's survival strategy, since significant rain events in western Riverside County are limited in most years to the months of November – March; harvesting fog-water during the months of April – June may be an important part of the Oak's moisture-gathering strategy for surviving the generally rainless months of April – October. Buildings, fences, and walls rising equal to or higher than the oak's elevation on the mountain could potentially decrease or prevent future fog flow onto the oak once the Project has been constructed.

It is unknown whether the buffer size presented in EIR would be sufficient to ensure the long-term survival of the Jurupa Valley Palmer oak. There was no information provided in the EIR or the appendices on how this buffer distance was calculated or what factors were considered when selecting the chosen buffer distance of only 200 to 259 feet. Also, no information was presented on how the proposed Project impacts would alter the microtopography surrounding the Jurupa Valley Palmer oak and how that would affect its long-term survival through potential changes to air currents, moisture availability, ground water resources, impacts to soil composition, etc. In addition, the EIR does not include a discussion of any of the potential indirect impacts from increased human recreation and activity on the Jurupa Palmer oak through unauthorized public access, domestic animal predation, illegal trespass, increased fire risk, and dumping.

The Wildlife Agencies strongly recommend that additional studies be conducted to better understand the potential long-term effects on the Jurupa Valley Palmer oak.

Evidence that the Impact Would Be Significant: Palmer oak is a shrub oak species which is sparsely distributed across California and Arizona (as well as distributed slightly into New Mexico, Baja California, and Mexico). It is a species which is in rapid decline, has specialized habitat requirements, and has extremely limited distribution within the MSHCP Plan Area (Beckman et al 2019). Much of this species' distribution is composed of isolated subpopulations that are presumed to be relics from a once-larger range that shrunk as aridity increased after the Pleistocene Ice Ages ended approximately 10,000 years ago. Many of the isolated occurrences north of Riverside County, California, have been found to consist of thickets or groups of oaks made up solely of clones of a single genetically distinct individual.

An isolated occurrence of Palmer oak has been identified on the Project site in drier habitat and at a lower altitude than has ever been previously reported for this species (Provance et al. 2000). There is no other record of Palmer oak in the Jurupa Valley area, and local floras do not report this species from any of the surrounding areas, except for a small occurrence on top of the Bernasconi Hills west of the San Jacinto River (Roberts et al. 2004). Based on stems collected from a variety of environmental conditions, it is estimated that the Jurupa Valley Palmer oak is at least 13,000 years old, which likely renders it among the oldest living plant on Planet Earth (May et al. 2009), older than the oldest redwood trees or bristlecone pines, among other notably old plants on Earth.

As trees age they become less able to recover from impacts associated with construction and are more likely to prematurely deteriorate. Due to the age of the Jurupa Valley Palmer oak onsite, it is extremely susceptible to both direct and indirect impacts associated with the Project.

Excessive or uncontrolled access within the areas surrounding the oak can result in habitat degradation and disruption of key ecological functions. Both human access and the potential for wildfire ignition from human activity can result in species displacement and invasive species introduction. Human use of and divergence from designated trails can have a significant effect on trailside native communities. Trampling may lead to a reduction in vegetation cover, reduced plant height, a change in predominant growth forms, and a change in composition to favor more resistant species (Goldsmith et al. 1970, Liddle 1975). In addition, human activity is a significant vector for non-native species introductions as invasive species commonly invade disturbed areas such as roads due to recurrent access by humans and the creation of available space (Mack et al. 2000, Tyser and Worley 1992, Knops et al.1995, and Vitousek et al.1997). Trails, including unofficial trails created by uncontrolled access to conservation lands, are also documented to be conduits for weedy annuals that increase fire frequency (Mack et al. 2000, Tyser and Worley 1992, and Knops et al.1995) and are therefore often specifically managed for weeds.

Research suggests that this Jurupa Valley Palmer oak is reproducing clonally and is not regenerating enough for eventual replacement (May et al. 2009). Attempts to germinate acorns from the Jurupa Valley Palmer oak in a greenhouse failed, whereas acorns collected from the Garner Valley (San Jacinto Mountains) population demonstrated normal viability under the same horticultural conditions. Therefore, any detrimental impacts to the Jurupa Valley Palmer oak by

the Project would result in permanent damage to this slow-growing plant, and the loss of the regenerating portions of the shrub would result in a total loss of this extremely unique Palmer's oak.

Recommended Potentially Feasible Mitigation Measure(s): Based on the insufficient information presented in the EIR and supporting documents, the Wildlife Agencies are unable to recommend potentially feasible mitigation measures at this time. The Wildlife Agencies strongly recommend that additional studies be conducted to better understand the potential long-term effects on the Jurupa Valley Palmer oak. Thus, we recommend that the City remove Mitigation Measure BIO-5 and recirculate the EIR once sufficient information has been obtained.

The Wildlife Agencies recommend that scientific studies be conducted to determine the specific identity and the spatio-temporal distribution of the sources of water for the Jurupa Valley Palmer oak. Specifically, to determine if the oak (1) is sourcing water from surface rain-runoff flows that will be diverted away from the oak under the proposed Project design; or (2) if the oak is relying on groundwater resources that may be impacted by grading and Project development; or (3) if the oak is partially sustained by fog drip from fog flowing slowly against the thicket's leaves and stems. If the studies show that fog is the main source of sustainable water buildings, fences, and walls rising equal to or higher than the oak's elevation on the mountain could potentially decrease or prevent future fog flow onto the oak once the Project has been constructed. Therefore, the Wildlife Agencies recommend that an isotopic discriminant study of the oak's stem water (in the xylem) be performed to help determine what fractions of the oak's moisture are received from fog drip, deep groundwater, and rainfall percolation into the soil, respectively.

We further recommend that the studies include a fog drip/fog condensation study of the oak and its ridge-top surroundings to determine if the oak is harvesting fog-water, and how often fog events occur at its location. As mentioned above, we suspect that the harvesting of fog-water during the Spring months may be an important component of the Jurupa Valley Palmer oak's survival strategy. Studies of this type have previously been conducted for native trees and shrubs in California (Ingraham & Matthews 1995; Sawaske & Freyberg 2015; Fischer et al 2016; Evola & Sandquist 2007; Potter 2016; Fischer & Still 2007), so it should be eminently feasible to adapt those studies' equipment and methods and apply them to the situation of the Jurupa Valley Palmer oak.

Comment #3: Coastal California Gnatcatcher

Issue: The Project may have a significant impact on the threatened coastal California gnatcatcher (*Polioptila californica californica),* a Species of Special Concern (SSC) and an ESA-listed species.

Specific impact: Project construction and activities may result in injury or mortality to coastal California gnatcatchers, disrupt natural coastal California gnatcatcher breeding behavior, and reduce reproductive capacity. Also, the Project may impact breeding, wintering, and foraging habitat for the species. Populations of coastal California gnatcatchers have been found to be genetically isolated from other populations within their range. Lack of genetic mixing between

other geographical populations is likely due to heightened fragmentation and loss of suitable habitat across their range in southern California (Vandergast 2019).

Why Impacts Would Occur: There are approximately 579.68 acres of potential habitat (brittle bush scrub and California buckwheat scrub) for coastal California gnatcatchers on the Project site and the surrounding 500-foot buffer, which includes the 363 acres set aside for conservation. Therefore, the proposed Project activities would remove 216 acres of coastal California gnatcatcher habitat. This area is occupied by coastal California gnatcatcher; coastal California gnatcatcher (*Polioptila californica californica*), was observed on the Project site during surveys from 2014 through 2018 by L&L Consulting. However, focused surveys for gnatcatchers have yet to be completed.

Surveys for coastal California gnatcatchers are necessary to understand the impacts the Project may have on gnatcatcher nesting habitat and to identify occupied gnatcatcher habitat to meet MSHCP requirements. The coastal California gnatcatcher is listed under the federal Endangered Species Act of 1973 as a threatened species, and the USFWS permit to the City for the MSHCP restricts clearing of coastal California gnatcatcher-occupied habitat during the nesting season: "Clearing of occupied habitat within [Public/Quasi-Public (PQP)] lands and the Criteria Area between March 1 and August 15 is prohibited." (per Condition 5b of the USFWS MSHCP permit). This condition protects gnatcatchers during the nesting season and prevents take of active nests, which if it occurred, would violate federal law (the Migratory Bird Treaty Act).

Gnatcatchers are territorial, year-round residents with high-site fidelity, and can be extremely quiet during brooding and therefore difficult to detect when nesting. There must be a clear understanding of habitat use by coastal California gnatcatcher before any vegetation removal or ground disturbance occurs. The Project Applicant cannot rely on nesting bird surveys just prior to grading to determine gnatcatcher use of coastal sage scrub and chapparal on the Project site. The Wildlife Agencies recommend focused surveys to determine coastal California gnatcatcher use of the site within one year of start of Project activities or adherence to the vegetation removal restriction periods in the permits; the emphasis should be on mapping the distribution of gnatcatchers within shrubland habitat across the various seasons of the year.

Evidence Impacts Would Be Significant: The coastal California gnatcatcher is an ESA- listed species and a California SSC. ESA-listed species are considered endangered, rare, or threatened species under CEQA (CEQA Guidelines, § 15380). Take under the ESA is more broadly defined than CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CEQA provides protection not only for State and federally listed species, but for any species including, but not limited to SSC, which can be shown to meet the criteria for State listing. SSC's meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15065). Take of SSC's could require a mandatory finding of significance (CEQA Guidelines, § 15065).

Coastal California gnatcatchers are non-migratory, territorial, and have been found not to disperse far from their natal nests (Bailey 1998; Vandergast 2019). Thus, the preservation of sensitive natural communities which they have been documented to utilize is paramount.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant avoid unlawfully taking of nesting birds, the Wildlife Agencies request the City include the following mitigation measures in the EIR per below (edits are in ~~strikethrough~~ and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program".

MM BIO-XX: Prior to grading or other ground-disturbing activities are proposed, a qualified biologist shall survey all potential nesting vegetation within and adjacent to the site for nesting coastal California gnatcatcher. The City of Jurupa Valley (City) shall impose conditions of approval on future grading permits requiring focused surveys to be conducted prior to ground disturbance or discing activities~~.~~ A minimum of twelve (12) surveys shall be conducted at least one week apart to determine the distribution of coastal California gnatcatchers in the Project's anticipated areas of impact on shrublands. Surveys shall be conducted by the Designated Biologist at the appropriate time of day, during appropriate weather conditions. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. Written and mapped qualitative descriptions of plant communities (including dominant species and habitat quality) on and adjacent to the area surveyed will also be provided with survey results to USFWS and California Department of Fish and Wildlife (CDFW), within 45 days following the field surveys, and prior to ground-disturbing activities. The results of the focused surveys shall be provided to the City, CDFW, and USFWS for review and approval prior to commencement of ground-disturbing activities (including, but not limited to, mowing, grubbing, and disking activities).

In the event that the focused surveys do not detect the presence of any coastal California gnatcatchers, the habitat will have been confirmed to be unoccupied by coastal California gnatcatchers, and MM BIO-1g has been completed, then ground disturbance or discing may occur during the nesting season (i.e., between March 1 and August 15). In the event that the focused surveys identify the presence of California gnatcatchers, then ground disturbance or discing of the occupied areas shall be prohibited between March 1 and August 15. If an active coastal California gnatcatcher nest is located, the nest site shall be fenced with a buffer of a minimum of 500 feet in all directions, and this area shall not be disturbed until after the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, as confirmed by a qualified biologist. If a nest is suspected, but not confirmed, the Designated Biologist shall establish a disturbance-free buffer until additional surveys can be completed, or until the nest's precise location can be inferred based on observations. If a nest is observed, but thought to be inactive, the Designated Biologist shall monitor the nest for one hour (four hours for raptors during the non-breeding season) prior to approaching the nest to determine

status. The Designated Biologist shall use their best professional judgement regarding the monitoring period and whether approaching the nest is appropriate. Project contractors shall be required to ensure compliance with these requirements and permit periodic inspection of the construction site by City of Jurupa Valley staff or its designee to confirm compliance.

Comment #3: Delhi Sands Flower-Loving Fly

Issue: The Project may impact Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis;* DSF; fly), a federally endangered species.

Specific Impacts: The Project may result in temporal or permanent loss of suitable nesting and foraging habitat. Project ground-disturbing activities may cause death or injury of adults, eggs, and larvae.

Why Impact Would Occur: According to page 58 in Section 3.8.1 of Appendix D *Biological Resources Supporting Information*, Delhi Sands flower-loving flies were observed on the western portion of the site by AMEC biologists in August 2005. Adult flies were observed on four (4) separate dates, and carcasses of dead flies were located on two (2) other dates. All Delhi Sands flower-loving fly observations were made within an approximately 3.73-acre area on the western side of the site, where flat areas containing Delhi series (sandy) soils are present next to a residential area. Surveys were also conducted in 2015 and 2016; however, no individuals were identified during those survey attempts. Direct effects would include the permanent conversion of fly-occupied habitat to Project infrastructure or changes to micro-/local hydrology. Indirect effects on Delhi Sands flower-loving fly during construction would include the accumulation of fugitive dust resulting in degradation of habitat for these invertebrates. In addition, changes to local runoff would have negative effects on the health and vigor of plants and soils that make up suitable habitat.

The Project proposes that it would impact 4.87 acres (24.4 percent) of the total 19.97 acres of Delhi soils present within the project site (see L&L BRA Figure 12, included in Appendix D). Of the 3.73 acres of occupied DSF habitat mapped in 2005, 0.84 acres (22.5 percent) will be directly impacted by the construction of the Project. It states that by implementing MM BIO-1b, which "would create a deed restriction of any avoided habitat to prevent future impacts, and species-specific conservation goals for DSF under the MSHCP, Project impacts to DSF would be reduced to less than significant levels."

Evidence Impact Would Be Significant: The Delhi Sands flower-loving fly was listed as an endangered species by the U. S. Fish and Wildlife Service (Service) on September 23, 1993 (58 Federal Register 49881). Take under the ESA is more broadly defined than under CESA. Take under the ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CEQA provides protection for State and federally listed species.

The Delhi Sands flower-loving fly is found only in small parts of San Bernardino and Riverside counties at the eastern edge of the Los Angeles Basin in areas of fine sandy soil known as Delhi series sands. While formerly widespread, this habitat has been intensively developed in the past

century, primarily for agriculture, though more recently for industry and housing. Only an estimated 2-3% of the original habitat remains undeveloped. As of the establishment of the Recovery Plan for the Delhi Sands flower-loving fly in 1997, only 12 sites were known to be inhabited by the Delhi Sands flower-loving fly, encompassing approximately 450 acres (190 hectares) of suitable habitat (USFWS 1997). The Rio Vista Specific Plan Project is located adjacent to two of these 12 sites and has been documented to be occupied by Delhi Sands flower-loving fly as of 2005.

The EIR has yet to provide any mitigation to offset the Project's anticipated impacts on the endangered Delhi Sands flower-loving fly. Accordingly, the Project would have a substantial adverse effect, either directly or through habitat modifications, on a species identified as federally endangered under the Endangered Species Act.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant to avoid unlawfully taking Delhi Sands flower-loving flies, the Wildlife Agencies request that the City include the following mitigation measures for DSF in the EIR per the following (edits are in ~~strikethrough~~ and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program".

MM BIO-XX: Prior to grading or other ground-disturbing activities, a qualified biologist shall survey all suitable habitat for Delhi Sands flower loving fly (DSF) according to the United States Fish and Wildlife Service (USFWS) survey protocol for this species (1996) as revised by USFWS in 2004. The City of Jurupa Valley (City) shall impose conditions of approval on future grading permits requiring focused surveys to be conducted prior to ground disturbance or discing activities~~.~~ Surveys shall be conducted by the Designated Biologist at the appropriate time of day, and during appropriate weather conditions for DSF flies to be active aboveground. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. Written and mapped qualitative descriptions of plant communities (including dominant species and habitat quality) on and adjacent to the area surveyed will also be provided with survey results to USFWS and California Department of Fish and Wildlife (CDFW), within 45 days following the field surveys, prior to ground disturbing activities. The results of the focused surveys shall be provided to the City, CDFW, and USFWS for review and approval prior to commencement of ground disturbing or discing activities.

If the protocol survey determines that some or all of the Delhi sands in the Rio Vista Specific Plan are occupied by the endangered Delhi sands flower-loving fly, then the City should make a determination as to whether or not the MSHCP Plan requires some or all of the occupied areas to be conserved (consistent with DSF conservation strategy "B", the option selected by the City

and the other MSHCP Permittees at the inception of the MSHCP Plan in 2004), and adjust the land use of the fly-occupied areas in the Rio Vista Specific Plan, if needed, to become consistent with DSF conservation strategy "B" in the MSHCP Plan, including the recordation of a conservation easement or transfer of fly-occupied areas to be conserved to a qualified wildlife habitat conservation organization, such as the Western Riverside County Regional Conservation Authority, the San Diego Habitats Conservancy, etc.

Comment #5: Burrowing Owl

Issue: The Project may have a significant impact on burrowing owl (*Athene cunicularia),* a Species of Special Concern (SSC).

Specific Impacts: Project construction and activities may result in injury or mortality of burrowing owl, disrupt natural burrowing owl breeding behavior, and reduce reproductive capacity. Also, the Project may impact breeding, wintering, and foraging habitat for the species. Habitat loss could result in local extirpation of the species and contribute to the ongoing local, regional, and state-wide decline of the burrowing owl.

Why Impacts Would Occur: The EIR identifies that protocol burrowing owl focused surveys of the Project site were completed, as described in the *2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* and that no burrowing owls were seen; however, suitable habitat was found. Additional details (the survey dates, times, etc.) were provided regarding the burrowing owl surveys mentioned within the EIR. As specified in the "Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area", a written report must be provided detailing results of the habitat assessment with photographs and indicating whether the project site contains suitable burrowing owl habitat and burrow locations.

There is insufficient information provided to determine if the proposed avoidance and minimization measures will mitigate Project impacts below a level of significance. BIO-1i would require a 300-500 foot buffer around occupied burrowing owl burrows, both during the nesting season and outside breeding season, with the precise buffer width to be determined by the surveying biologist. However, the buffer proposed could be an insufficient buffer from occupied burrows and adjacent foraging grounds given the types of disturbance associated with the Project. Burrowing owls can react adversely to low-level disturbances such as vehicle movement in the vicinity, or minimal ground disturbance/excavation (Environment Canada 2009). The Project is proposing a buffer that may be more suitable for low-level disturbances; however, the Project could generate noise and ground vibrations more consistent with medium to high levels of disturbance. Project construction would generate noise and ground vibrations during daytime and nighttime earthmoving activities, demolition, tunneling, spoils hauling, and operation of large machinery. A mere 500-foot buffer from occupied burrows during these types of more intense disturbances could result in burrowing owls abandoning active nests, potentially causing loss of eggs or developing young, and noise could cause birds to avoid suitable nesting habitat. Finally, a buffer would not protect important foraging habitat during the burrowing owl nesting season.

Implementation of buffers may not be sufficient to offset potential impacts to burrowing owls, which means that the mitigation proposed would not be effective in reducing the Project's impacts to burrowing owls to the less-than-significant level. Furthermore, CDFW's 2012 Staff Report on Burrowing Mitigation (CDFG 2012) does not support relocating burrowing owls during their breeding season as a mitigation measure. BIO-1i does not provide any performance standards suitable for successfully mitigating impacts on burrowing owl habitat. The mitigation measure proposed in the EIR may not satisfy the CEQA standards for mitigation such that "the formulation of mitigation measures shall not be deferred until some future date" (CEQA Guidelines, § 15126.4).

Evidence Impact Would Be Significant: The burrowing owl is a California Species of Special Concern (SSC), which are defined as species, a subspecies, or a distinct population of a species native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;

- is listed as ESA-, but not CESA-, threatened, or endangered; or meets the State definition of threatened or endangered, but has not formally been listed;

- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and/or,

- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for CESA threatened or endangered status (CDFW 2022b). CEQA provides protection not only for ESA and CESA-listed species, but for any species including but not limited to SSC which can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). In addition, migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor.

In California, burrowing owls are in decline primarily because of habitat loss due to conversion of their habitat to urban development, supplemented by disease, predation, and drought. Burrowing owls require specific soil and microhabitat conditions, occur in few locations within a broad habitat category of grassland and some forms of agricultural land, require a relatively large home range to support their life history requirements, occur in relatively low numbers, and are semi-colonial.

The Project's impacts on burrowing owls have not been mitigated below a significant level in the EIR. Accordingly, the Project would have a substantial adverse effect, either directly or through

habitat modifications, on a species identified as a candidate, sensitive, or special-status species by the Wildlife Agencies.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To avoid take of active burrowing owl burrows (nests), the Wildlife Agencies request the City include the following mitigation measures in the EIR per below (edits are in ~~strikethrough~~ and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program.

MM-Bio-1i:

A) Prior to the issuance of a grading permit, the Planning Department shall verify that the burrowing owl breeding season protocol survey is not more than one year old. If it is older than one year, an updated breeding season protocol survey for burrowing owl shall be conducted within all suitable burrowing owl habitat on the site and a 150-meter buffer. A copy of the report shall be provided to the Planning Department **and the two Wildlife Agencies** before grading occurs. **If one or more owl-occupied burrows are identified by the breeding season protocol survey, then the Project Applicant shall immediately prepare a Burrowing Owl Protection and Relocation Plan (BOPaRP) for review and approval by USFWS and CDFW, without deferring such preparation to a later time, and the 30-day pre-construction burrowing owl survey will no longer be required. The proposed BOPaRP shall be submitted to the two Wildlife Agencies through the City once the City has reviewed the draft BOPaRP.**

b) **If no burrowing owls are detected in the Project vicinity by the most recent breeding-season burrowing owl protocol survey, then, p**rior to the issuance of a grading permit, a pre-construction burrowing owl ~~clearance~~ survey **in accordance with the March 2006 Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area** shall be conducted **by a qualified biologist** no more than 30 days before ground or vegetation disturbance**, including grubbing, tree removal, or site watering.** The surveys shall be conducted as close to the actual construction initiation date as possible. **In addition, a preconstruction survey for burrowing owl shall be conducted within 3 days prior to initiation of Project activities and reported to CDFW. Additionally, if ground-disturbing activities occur, but the site is subsequently left without further disturbance for more than 30 days, a pre-construction survey shall again be necessary to reconfirm that burrowing owls have not colonized the site since it was last disturbed.**

If no burrowing owls are observed during all the surveys, site preparation and construction activities may begin.

If **burrowing owls are detected by the pre-construction survey**, the Biologist shall notify **the City of Jurupa Valley, the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) field office in**

Palm Springs with written notification sent within 48 hours of detecting the burrowing owls. If owl-occupied burrows are identified on an implementing Project site during the pre-construction survey, the Project Applicant shall not commence activities until the City receives CDFW and USFWS approval of a Burrowing Owl Protection and Relocation Plan, as described below.

If owl presence is difficult to determine, a qualified biologist shall monitor the burrows with motion-activated trail cameras for at least 24 hours to evaluate burrow occupancy. The onsite qualified biologist will verify the nesting effort has finished according to methods identified in the Burrowing Owl **Protection and Relocation** Plan**.** A copy of the plan shall be provided to the Planning Department.

The BOPaRP shall be implemented prior to any construction activities that may disturb burrowing owls. Mitigation shall be based on the following goals and requirements in the Multiple Species Habitat Conservation Plan (MSHCP):

1. If the site contains or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than three pairs of burrowing owls, on-site burrowing owls shall be passively or actively relocated following accepted protocols.

~~2. Occupied nests shall be avoided during the nesting season (February 1- August 31) along with a buffer of 300- 500 feet dependent upon the level of disturbance surrounding the burrow.~~

~~3. Burrow exclusion shall be utilized outside of the nesting season by installing a one-way door in burrow openings. Burrows shall be closed following verification they are empty through site monitoring and scoping.~~

4. If the project site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is noncontiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs shall be conserved on-site.

The qualified biologist and **the** Project Applicant shall coordinate with the City, CDFW, and USFWS to develop a Burrowing Owl **Protection and Relocation** Plan to be approved by CDFW and USFWS prior to commencing Project activities. The **Burrowing Owl Protection and Relocation Plan** shall describe **the Project's** proposed avoidance, relocation, monitoring, minimization, and/or mitigation actions **to protect burrowing owls from harm and to maintain their survival and numbers in the MSHCP Plan Area**. The **Burrowing Owl Protection and Relocation Plan** shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls, or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management

activities for relocated owls shall also be included in the **Burrowing Owl Protection and Relocation Plan**. The City will implement the **Burrowing Owl Protection and Relocation Plan** following CDFW and USFWS review and approval.

If burrowing owls are observed within Project Site(s) during Project implementation and construction, the Project Applicant shall notify the Wildlife Agencies immediately in writing within 48 hours of detection. A Burrowing Owl Plan will be submitted to the Wildlife Agencies for review and approval within two weeks of detection and no Project activities will occur within 1,000 feet of the burrowing owls' burrows until the Wildlife Agencies approves the Burrowing Owl Protection and Relocation Plan. The City shall be responsible for implementing appropriate avoidance and mitigation measures, including burrow avoidance, passive or active relocation, or other appropriate mitigation measures as identified in the Burrowing Owl Protection and Relocation Plan.

A final **survey** report shall be prepared by a qualified biologist documenting the results of the burrowing owl surveys and detailing avoidance, minimization, and mitigation measures. The final report will be submitted to the City and the Wildlife Agencies within 30 days of completion of the survey for mitigation monitoring compliance record keeping.

Comment #6: Nesting Birds, Eggs, and Nestlings

Issue: The Project may have a significant impact on nesting birds, including Species of Special Concern and fully protected species, that are subject to Fish and Game Code section 3513 and the Migratory Bird Treaty Act of 1918.

Specific Impact: Project implementation could result in the loss of nesting and/or foraging habitat for passerine and raptor species from the removal of vegetation onsite.

Why Impacts Would Occur: Project activities could result in temporary or long-term loss of suitable nesting and foraging habitats. Construction during the breeding season of nesting birds could potentially result in the incidental loss of breeding success or otherwise lead to nest abandonment. Noise from road use, generators, and heavy equipment may disrupt nesting bird mating calls or songs, which could impact reproductive success (Patricelli and Blickley 2006, Halfwerk et al. 2011). Noise has also been shown to reduce the density of nesting birds (Francis et al. 2009), and songbird abundance and density was significantly reduced in areas with high levels of noise (Bayne et al. 2008). Additionally, noise exceeding 70 dB(A) may affect feather and body growth of young birds (Kleist et al. 2018). In addition to construction activities, residential development and increased human presence in the Project site could contribute to nesting bird impacts.

The timing of the nesting season varies greatly depending on several factors, such as the bird species, weather conditions in any given year, and long-term climate changes (e.g., drought, warming, etc.). The Wildlife Agencies have observed that changing climate conditions may result in the nesting bird season occurring earlier and later in the year than historical nesting season dates. The Wildlife Agencies recommend the completion of nesting bird survey

regardless of time of year to ensure compliance with all applicable laws pertaining to nesting and to avoid take of nests.

The duration of a pair to build a nest and incubate eggs varies considerably, therefore, the Wildlife Agencies recommend surveying for nesting behavior and/or nests and construction within three days prior to start of Project construction to ensure all nests on site are identified and to avoid take of nests. Without appropriate species-specific avoidance measures, biological construction monitoring may be ineffective for detecting nesting birds. This may result in Take of nesting birds. Project ground-disturbing activities such as grading and grubbing may result in habitat destruction, causing the death or injury of adults, juveniles, eggs, or hatchlings. In addition, the Project may remove habitat by eliminating native vegetation that may support essential foraging and breeding habitat.

Evidence Impacts Would Be Significant: It is the Project proponent's responsibility to avoid Take of all nesting birds. Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.). Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. These regulations apply anytime nests or eggs exist on the Project site.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant avoid unlawfully taking of nesting birds, the Wildlife Agencies request the City include the following mitigation measures in the EIR per below, and also included in Attachment 1"Mitigation Monitoring and Reporting Program.

> **Mitigation Measure 1g:** To prevent impacts to nesting birds (including raptors), clearing or other work in native habitats shall be avoided during the nesting season ~~(January 1 through September 15)~~. If work cannot be avoided during this timeframe, a nesting bird survey shall be conducted by a qualified Biologist within 3 days prior to ~~issuance of a grading or building permit~~ **site preparation activities (such as ground disturbance, construction activities, and/or removal of trees and vegetation)**. **The survey results shall be provided to the City's Planning Department and the Project Applicant shall adhere to the following:**
>
> 1. **Applicant shall designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and**

minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

2. **Pre-activity field surveys shall be conducted at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of Project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the Project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate.**

If no nesting birds are observed during the survey, site preparation and construction activities may begin. If **an active nest or** nesting birds are present, ~~a Nesting Bird Plan shall be developed and implemented The Nesting Bird Plan shall include appropriate measures such as establishment and maintenance of a buffer area while the nest is active. The size of the buffer area shall be defined by a qualified Biologist based on the specific nesting species, as defined below~~**. avoidance buffers shall be implemented as determined by a qualified biologist and approved by the City of Jurupa Valley, based on their best professional judgement and experience** in accordance with the Migratory Bird Treaty Act (MBTA) regulations and the California Fish and Wildlife Code **Sections 3503, 3503.5, and 3513. The Designated Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. The qualified biologist shall halt all construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take.**

Active bird nests shall be mapped utilizing a handheld Global Positioning System (GPS), getting as close as possible without disturbing the nest, ~~and a buffer shall be flagged around the nest (300 feet for non-raptors, 500 feet for raptor nests, or as determined by the Biologist).~~ **The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned.** Construction shall not be permitted within buffer areas while the nest continues to be active. Once fledging has occurred or the nest otherwise becomes inactive, no further avoidance shall be required. An active nest is defined as a nest that is being built or in use as part of the reproductive process, including a nest with eggs, chicks, or dependent juveniles. **The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a**

report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.

The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.

Comment #7: Crotch's Bumble Bee

Issue: The Project may impact Crotch's bumble bee (*Bombus crotchii*).

Specific Impacts: The Project may result in temporal or permanent loss of suitable nesting and foraging habitat. Project ground-disturbing activities may cause death or injury of adults, eggs, and larva; burrow collapse; nest abandonment; and reduced nest success.

Why Impact Would Occur: According to page 57 in Section 3.8.1 of Appendix D Biological Resources Supporting Information, Crotch's bumble bee was observed on the Project site during the 2005 biological surveys conducted by AMEC and focused surveys have yet to be conducted. Direct effects also include the permanent conversion of occupied habitat to project infrastructure or changes to micro/local hydrology. Indirect effects on Crotch's bumble bee during construction would include the accumulation of fugitive dust resulting in degradation of habitat for these invertebrates. In addition, changes to local runoff would have negative effects on the health and vigor of plants that make up suitable habitat.

The Project proposes MM BIO-1k to mitigate the Project's impact. However, the Project's impact on Crotch's bumble bee has yet to be mitigated below a level of significance. MM-BIO 1k does not provide performance criteria or action(s) to meet those performance criteria to compensate for the loss of Crotch bumble bee habitat (CEQA Guidelines, § 15126.4).

Evidence Impact Would Be Significant: The California Fish and Game Commission accepted a petition to list Crotch bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Crotch bumble bee is granted full protection of a threatened species under CESA. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). In addition, Crotch bumble bee has a State ranking of S1/S2. This means that the Crotch bumble bee is considered critically imperiled or imperiled and is extremely rare (often five or fewer populations). Crotch bumble bee is also listed as an invertebrate of conservation priority under the Terrestrial and Vernal Pool Invertebrates of Conservation Priority (CDFW 2017). The Project's impact on Crotch bumble bee has yet to be mitigated. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant avoid unlawfully taking of Crotch's bumble bee, the Wildlife Agencies request the City include the following mitigation measures in the EIR per below (edits are in strikethrough and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program".

Mitigation Measure BIO-1k: Because of suitable habitat within the project site, within one year prior to vegetation removal and/or grading, a qualified entomologist familiar with Crotch's bumble bee behavior, **as approved by CDFW**, and life history conduct surveys **in accordance with any Crotch's bumble bee survey protocol provided by CDFW** to determine the presence/absence of Crotch's bumble bee. Surveys should be conducted during flying season when the species is most likely to be detected above ground, between March 1 to September 1. Surveys should be conducted within the project site and areas adjacent to the project site where suitable habitat exists. If a colony is present, a 100-foot avoidance buffer shall be established. Survey results, including negative findings, should be submitted to the California Department of Fish and Wildlife (CDFW) prior to project-related vegetation removal and/or ground-disturbing activities. If a survey finds that a Crotch's bumble bee ~~colony~~ is present on the project site or **Crotch's bumble bee are observed during Project activities**, the project Biologist shall consult with CDFW. **The qualified biologist should identify the location of all nests in or adjacent to the Project site. If Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, should expand the buffer zone as necessary to prevent disturbance or take.** If the proposed project impacts Crotch's bumble bee, an Incidental Take Permit from the CDFW shall be obtained **pursuant to Fish and Game Code section 2081 subdivision (b)** and/or other mitigation shall be implemented as required by the CDFW.

Any floral resource associated with Crotch's bumble bee that will be removed or damaged by the Project should be replaced at no less than 2:1. Floral resources should be replaced as close to their original location as is feasible. If active Crotch's bumble bee nests have been identified and floral resources cannot be replaced within 200 meters of their original location, floral resources should be planted in the most centrally available location relative to identified nests. This location should be no more than 1.5 kilometers from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. These floral resources should be maintained in perpetuity and should be replanted and managed as needed to ensure the habitat is preserved.

Comment #8: Impacts to Rare and Species of Special Concern

Issue: The Project identified a total of one special-status plant species and 9 special-status wildlife species onsite during the various biological surveys. An additional two special-status plant species and 18 special-status wildlife species were described as having moderate to high potential to occur within the Project site. CDFW is concerned that the proposed mitigation may not provide enough specificity to sufficiently avoid or minimize impacts to California Species of Special Concern (SSC).

Specific Impact: The EIR and supporting Appendix B identify the Project site has confirmed occurrences of Plummer's mariposa lily (*Calochortus plummerae*), Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Lawrence's goldfinch (*Spinus lawrencei*), northern harrier (*Circus hudsonius*), great egret (*Ardea alba*), Costa's hummingbird (*Calypte costae*), red-diamond rattlesnake (*Crotalus ruber*), orange-throated whiptail (*Aspidoscelis hyperythra*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) within the Project site. Direct impacts to SSCs could result from Project construction and activities (e.g., equipment staging, mobilization, and grading); ground disturbance; vegetation clearing; and trampling or crushing from construction equipment, vehicles, and foot traffic. Indirect impacts could result from temporary or permanent loss of suitable habitat.

Why Impacts Would Occur: Without appropriate species-specific avoidance measures, biological construction monitoring may be ineffective for detecting SSC. This may result in trampling or crushing of SSC. Demolition and paving after false negative conclusions may trap wildlife hiding under refugia and burrows. Project ground-disturbing activities such as grading and grubbing may result in habitat destruction, causing the death or injury of adults, juveniles, eggs, or hatchlings. In addition, the Project may remove habitat by eliminating native vegetation that may support essential foraging and breeding habitat.

Evidence Impacts Would Be Significant: CEQA provides protection not only for state and federally listed species, but for any species including but not limited to California Species of Special Concern which can be shown to meet the criteria for State listing. These Species of Special Concern meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15065). Take of SSC could require a mandatory finding of significance by the City (CEQA Guidelines, § 15065).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1 and 2: To address the above issues and help the Project applicant avoid unlawfully take of nests and eggs, CDFW requests the City include the following mitigation measures in the EIR per below (edits are in strikethrough and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program".

MM BIO-XX: Scientific Collecting Permit – The City/qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate SSC wildlife and rare plants, and to avoid harm or mortality in connection with Project construction and activities.

MM BIO-1h Biological Monitoring and Clearance Surveys: Prior to issuance of a grading permit, ~~an engagement letter from~~ a qualified Biologist **with experience surveying for each of the following species shall be retained: Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Lawrence's goldfinch (*Spinus lawrencei*), northern harrier (*Circus hudsonius*), great egret (*Ardea alba*), Costa's hummingbird (*Calypte costae*), red-diamond rattlesnake (*Crotalus ruber*), orange-throated whiptail (*Aspidoscelis*

hyperythra), **and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Prior to commencing any Project-related ground-disturbing activities, the qualified biologist should conduct surveys for where suitable habitat is present. Project related activities include construction, equipment and vehicle access, parking, and staging. Focused surveys should consist of daytime surveys and nighttime surveys no more than one month from the start of any ground-disturbing activities. The surveys should include mapping of current locations of special-status wildlife species for avoidance and relocation efforts and to assist construction monitoring efforts. The survey should be conducted so that 100 percent coverage of the project site and surrounding areas is achieved. In addition, resumes/and or statements of qualifications** shall be provided to the City by the applicant identifying one or more qualified Biological Monitors that will be assigned to the project to monitor construction activities. Monitors shall be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, jurisdictional waters, and sensitive or unique biological resources are avoided to the extent possible.

The City in consultation with a qualified biologist should prepare a Workers Environmental Awareness Program (WEAP) training **prior to implementation of Project ground-disturbing activities.** Monitors shall ~~also~~ conduct ~~Workers Environmental Awareness Program (~~WEAP~~)~~ training to inform construction personnel of applicable mitigation measures and permit conditions, and any potential for **infraction and should include effective, specific, enforceable, and feasible actions. The qualified biologist should have prepared maps showing locations where SSC were detected and share this information to workers as part of training. The qualified biologist shall meet with the construction crew at the project site at the onset of construction to educate the construction crew on the following: 1) a review of the project boundaries; 2) all special-status species that may be present, their habitat, and proper identification; and 3) the specific mitigation measures that will be incorporated into the construction effort. The qualified biologist should communicate to workers that upon encounter with a SSC, work must stop, a qualified biologist must be notified, and work may only resume once a qualified biologist has determined that it is safe to do so. Any contractor or employee that inadvertently kills or injures a special-status animal, or finds one either dead, injured, or entrapped, should immediately report the incident to the qualified biologist and/or onsite representative identified in the worker training.** The Biological Monitor shall submit a weekly report to the City inspector, and shall promptly identify any concerns or violations, as needed.

A Biological Monitor shall be present during initial site clearing activities (vegetation clearing, soil preparation, and ground disturbance), during work adjacent to avoided Delhi soils and jurisdictional waters and Multiple Species Habitat Conservation Plan (MSHCP) Riparian/Riverine habitat, and at appropriate intervals throughout construction to ensure compliance with mitigation measures and regulatory permit conditions.

In addition, a qualified Biologist shall conduct clearance surveys for special-status plant or wildlife resources within or adjacent to the project disturbance area within three calendar days prior to initial vegetation clearing and ground disturbance, including fence installation. **Daily biological monitoring should be conducted during any activities involving vegetation clearing or modification of natural habitat. Surveys for SSC should be conducted prior to the initiation of each day of vegetation removal activities in suitable habitat. Surveys for SSC should be conducted in the areas flagged in earlier surveys before construction and activities may occur in or adjacent to those areas. Work may only occur in these areas after a qualified biologist has determined it is safe to do so. Even so, workers should be advised to work with caution near flagged areas. If SSC is encountered, qualified biologist should safely protect or relocate the animal per relocation and handling protocols.**

If any special-status plants or wildlife are found, the Biologist shall take appropriate action as defined in the MSHCP, mitigation measures, permit conditions, and regulations. **The qualified biologist should use visible flagging to mark the location where SSC was detected. The qualified biologist should take a photo of each location, map each location, and provide the specific species detected at that location.** ~~Federal, State, and local agencies shall be consulted as needed and appropriate. If needed, an avoidance buffer shall be established to protect the resource until this action has been completed~~**. The qualified biologist should provide a summary report of SSC surveys to the City before any Project-related ground-disturbing activities. The CDFW should be notified and consulted regarding the presence of any special-status wildlife species found on site during surveys. If an Endangered Species Act-listed species is found prior to or during grading of the site, the USFWS should also be notified. If any special-status or listed species are/have been observed on or in proximity to the Project site, Permittee shall submit California Natural Diversity Data Base (CNDDB) forms and maps to the CNDDB within five working days of the sightings. Additional avoidance and minimization measures may need to be developed with CDFW/USFW.**

Where applicable, wildlife should be protected, allowed to move away on its own (non-invasive, passive relocation), or relocated to adjacent appropriate habitat within the open space on site or in suitable habitat adjacent to the project area (either way, at least 200 feet from the grading limits). Special status wildlife should be captured only by a qualified biologist with proper handling permits. The qualified biologist should prepare a species-specific list (or plan) of proper handling and relocation protocols and a map of suitable and safe relocation areas. The list (or plan) of protocols should be implemented during project construction and activities/biological construction monitoring. The City/qualified biologist may consult with CDFW/USFWS to prepare species-specific protocols for proper handling and relocation procedures. Only a USFWS approved biologist should be authorized to capture and relocate ESA-listed species. A relocation plan should be submitted to CDFW and USFWS for review and comment prior to implementing Project-related ground-disturbing activities.

If any SSC are harmed during relocation or a dead or injured animal is found, work in the immediate area should stop immediately, the qualified biologist should be notified, and dead or injured wildlife documented immediately. The qualified biologist should contact the USFWS, CDFW, and the City by telephone by the end of the day, or at the beginning of the next working day if the agency office is closed. In addition, a formal report should be sent to the City, CDFW, and USFWS (as appropriate) within three calendar days of the incident or finding. The report should include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death.

Monitoring and survey activities shall be documented, and, **summaries shall be submitted on a monthly basis during periods of Project activity until Project completion or monitoring is complete. Monitoring reports of any passively relocated species shall also be included.** At the conclusion of project construction activities, **a final construction report shall be submitted to CDFW and the City at least two weeks after the Project is fully completed including color photographs of before and after Project-related activities, including the surrounding staging areas. The construction report at a minimum shall contain pre- Project photographs, total amount of area impacted post-Project, post-Project photographs, and biological survey notes (including construction monitoring).** ~~a~~**A**ll monitoring reports and communications shall be retained in project files to allow review by the lead agency and ~~w~~**W**ildlife ~~a~~**A**gencies, ~~if requested~~.

MM BIO-XX: Plummer's Mariposa Lily Mitigation: **Prior to issuance of a grading permit, a botanist experienced in identifying *Calochortus* species in the field shall map the locations of the Plummer's mariposa lilies (*Calochortus plummerae*) inside the Project's anticipated permanent and temporary impact areas during the month of June (the month when the species is detectable and identifiable in the field), and the Project shall immediately remove the Plummer's mariposa lilies from the impact areas via hand excavation, and transport them to a nursery specializing in the cultivation of native California plants, where the mariposa lilies shall be cared for until cooler weather in Autumn. The salvaged mariposa lilies shall be planted into suitable habitat inside the Project's conservation areas between October and December (the precise timing shall be determined by the horticulturalists at the native plant nursery, but shall be selected to minimize the mortality rate of the transplanted mariposa lilies). The receptor areas shall only consist of areas which will be placed into permanent conservation or is currently conserved via a conservation easement or transfer of title by the Project, and which shall be maintained in perpetuity by a qualified habitat maintenance organization such as the Western Riverside County Regional Conservation Authority, or the San Diego Habitats Conservancy, etc.**

Comment #9: Noise Pollution

Issue: Construction may result in substantial noise through road use, equipment, and other Project-related activities.

Specific Impacts: The proposed Project activities may result in a substantial amount of noise through road use, equipment, and other project-related activities. This may adversely affect wildlife species in several ways as wildlife responses to noise can occur at exposure levels of only 55 to 60 dB (Barber et al. 2009).

Why Impact Would Occur: Anthropogenic noise can disrupt the communication of many wildlife species including frogs, birds, and bats (Sun and Narins 2005, Patricelli and Blickley 2006, Gillam and McCracken 2007, Slabbekoorn and Ripmeester 2008). Noise can also affect predator prey relationships as many nocturnal animals such as bats and owls primarily use auditory cures (i.e., hearing) to hunt. Additionally, many prey species increase their vigilance behavior when exposed to noise because they need to rely more on visual detection of predators when auditory cues may be masked by noise (Rabin et al. 2006, Quinn et al. 2017). Noise has also been shown to reduce the density of nesting birds (Francis et al. 2009) and cause increased stress that results in decreased immune responses (Kight and Swaddle 2011).

Evidence Impact Would Be Significant: Construction may result in substantial noise through road use, equipment, and other Project-related activities. The EIR (Section 3.13-18) states construction noise would occur due to the use of equipment that includes a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels, but includes no analysis of the impacts of construction noise on biological resources. The EIR indicates noise levels have the potential to reach 67 to 85 dBA during the hours when construction is permitted, which exceeds exposure levels that may adversely affect wildlife species. In addition, there is no analysis provided to analyze the effect of potential blasting that may be utilized during construction. The Wildlife Agencies are concerned about impacts to wildlife from noise generated during Project activities.

Per the MSHCP, wildlife adjacent to MSHCP Conservation Areas should not be subject to noise that would exceed residential noise standards. However, MM BIO-1f only has the generic language from the MSHCP and does provide specific details on the types of measures that will be implemented to reduce noise impacts to the adjacent Conservation Area. CDFW recommends that MM BIO-1f is revised to provide specific measures to address noise impacts from the development to reduce edge effects from noise on the adjacent Conservation area. These measures should establish existing noise levels in the Conservation Area and post-project monitoring to evaluate the noise levels in the Conservation Area during construction and after the Project is complete.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant avoid impacts from noise, CDFW requests the City include the following mitigation measures in the EIR per below (edits are in strikethrough and **bold**), and also included in Attachment 1“Mitigation Monitoring and Reporting Program”.

MM BIO-XX:: Prior to approval of the Final Design, a Noise plan shall be submitted to the City of Jurupa Valley for review and approval. Proposed The Noise Plan shall identify noise generating land uses that may affecting the MSHCP Conservation Area and shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards. The Noise Plan shall include monitoring during construction and post-project to demonstrate noise levels in the Conservation Area do not exceed residential standards. If noise standards are exceeded, the Project Applicant is responsible for immediate implementation of remedial actions to reduce noise levels to acceptable levels.

Comment #10: Lighting and Light Pollution

Issue: Artificial lighting that does not conform to wildlife-friendly lighting guidelines often results in light pollution, which has the potential to significantly and adversely affect fish and wildlife.

Specific Impacts: Artificial lighting and the resulting light pollution alter ecological processes including, but not limited to, the temporal niches of species; the repair and recovery of physiological function; the measurement of time through interference with the detection of circadian and lunar and seasonal cycles; and the detection of resources and natural enemies and navigation (Gatson et al. 2013). Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004). Further, many of the effects of artificial nighttime lightning on population- or ecosystem-level processes are still poorly known.

Why Impact Would Occur: The EIR identifies that light and glare from interior and exterior building lighting, safety and security lighting, and vehicular traffic accessing the site will occur once the site is in operation and would introduce a new source of light into the adjacent Conservation Area. Nighttime lighting has the potential to indirectly affect wildlife use and activity in adjacent Conservation Area. Shielded lighting will produce a glow, and with enough lights, may increase the ambient light level in the area at night. Species may be subject to increased predation from diurnal predators foraging for longer periods due to light from the adjacent development as well as increased visual acuity of nocturnal predators. The EIR does not identify species that may be more vulnerable to increased predation from increased visibility and other impacts of adjacent lighting.

The EIR identifies that the proposed Project would be developed in accordance with the MSHCP requirements and that must comply with the City's requirements that lighting be restricted to the Project site through shielding and directing light downward. However, the EIR provides limited detail on shielded lighting in MM BIO-1f and lacks specific, technical details on the type of lighting along the Conservation Area boundary. The EIR does not provide data on existing

ambient lighting conditions and does not analyze the impacts of the lighting on the adjacent Conservation Areas. The EIR does not contain any measure that could be sufficient to offset the impacts of Project-related lighting on the Conservation Area. To ensure that any building, traffic, or parking area lighting would not significantly impact species within the Conservation Area and would comply with MSHCP urban wildlife interface guidelines, the Wildlife Agencies recommend the Project is conditioned to provide a Lighting Plan that identifies existing ambient lighting conditions, analyzes the lighting impacts on the adjacent conservation area, and demonstrates that the proposed lighting plan will not significantly increase the lighting on the Conservation Area.

Evidence Impact Would Be Significant: A significant source of artificial nighttime lighting with the potential to impact wildlife in adjacent conservation areas may come from lighting associated with the Project. Although the CEQA document indicates that all lightning will be shielded and directed away from wildlife areas, the Wildlife Agencies recommend that lightning analysis before Project construction and operations is needed to determine that existing lighting levels and to demonstrate that potential lightning impacts to wildlife using adjacent conserved area will be less than significant. To determine if artificial nighttime lighting associated with Project construction and operations will result in minimal to no increase from existing lighting levels to all areas of Conservation Area, the Wildlife Agencies recommend that lighting and glare impacts are evaluated before, during, and after Project construction and operations. The Wildlife Agencies request the inclusion of the following new measures in the DEIR:

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To address the above issues and help the Project applicant avoid impacts from light and light pollution, CDFW requests the City include the following mitigation measures in the EIR per below (edits are in strikethrough and **bold**), and also included in Attachment 1"Mitigation Monitoring and Reporting Program".

MM BIO-XX: To reduce nighttime artificial lighting-related impacts to wildlife using conservation areas, the Project shall take lightning measurements before, during, and post construction operations to determine impacts of nighttime artificial lightning on adjacent conservation areas and the wildlife it supports. To protect wildlife using conserved areas, project construction and operations shall result in not net increase to pre-construction ambient night-time levels to all areas of conservation areas. If light or glare impacts to conservation areas exceed this threshold, the Project shall make changes to their operations and/or adopt landscape shielding, dimming, lighting curfews or other appropriate measures that result in the Project causing minimal to no glare to all conserved.

Additional Recommendations

Weed Management Plan. A weed management plan should be developed for the Project site and implemented during the duration of this long-term Project. On-going soil disturbance promotes establishment and growth of non-native weeds. As part of the Project, non-native

weeds should be prevented from becoming established. The Projects site should be monitored via mapping for new introductions and expansions of non-native weeds.

Mitigation and Monitoring Reporting Plan

The Wildlife Agencies recommends updating the EIR's proposed Biological Resources Mitigation Measures to include mitigation measures recommended in this letter. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments [Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15126.4(a)(2)]. As such, the Wildlife Agencies have provided comments and recommendations to assist the City in developing mitigation measures that are (1) consistent with CEQA Guidelines section 15126.4; (2) specific; (3) detailed (i.e., responsible party, timing, specific actions, location), and (4) clear for a measure to be fully enforceable and implemented successfully via mitigation, monitoring, and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). The City is welcome to coordinate with the Wildlife Agencies to further review and refine the Project's mitigation measures. Per Public Resources Code section 21081.6(a)(1), the Wildlife Agencies have provided the City with a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation and Monitoring Reporting Plan (MMRP; Attachment 1).

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

The Wildlife Agencies appreciate the opportunity to comment on the EIR for the Rio Vista Specific Plan Project, State Clearinghouse No. 2018121005 to assist in identifying and mitigating Project impacts on biological resources. Wildlife Agencies personnel are available for consultation regarding biological resources and strategies to minimize impacts. The Wildlife

Agencies request that the City of Jurupa Valley address their comments and concerns prior to adoption of the EIR for the Project.

If you have any questions or comments regarding this letter, and to schedule a meeting, please contact James Thiede of the Service at james_thiede@fws.gov or Katrina Rehrer of CDFW at katrina.rehrer@wildlife.ca.gov.

Sincerely,

Digitally signed by ROLLAND WHITE
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Attachment A: Draft Mitigation and Monitoring Reporting Plan

The Wildlife Agencies recommend the following language to be incorporated into a future environmental document for the Project. A final MMRP shall reflect results following additional plant and wildlife surveys and the Project's final on and/or off-site mitigation plans.

Biological Resources (BIO)			
Mitigation Measure (MM)		**Timing**	**Responsible Party**
Coastal California Gnatcatcher	**MM BIO-XX**: Prior to grading or other ground-disturbing activities are proposed, a qualified biologist shall survey all potential nesting vegetation within and adjacent to the site for nesting coastal California gnatcatcher. The City of Jurupa Valley (City) shall impose conditions of approval on future grading permits requiring focused surveys to be conducted prior to ground disturbance or discing activities. A minimum of twelve (12) surveys shall be conducted at least one week apart to determine the distribution of coastal California gnatcatchers in the Project's anticipated areas of impact on shrublands. Surveys shall be conducted by the Designated Biologist at the appropriate time of day, during appropriate weather conditions. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. Written and mapped qualitative descriptions of plant communities (including dominant species and habitat quality) on and adjacent to the area surveyed will also be provided with survey results to USFWS and California Department of Fish and Wildlife (CDFW), within 45 days following the field surveys, and prior to ground-disturbing activities. The results of the focused surveys shall be provided to the City, CDFW, and USFWS for review and approval prior to	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

	commencement of ground-disturbing activities (including, but not limited to, mowing, grubbing, and disking activities). In the event that the focused surveys do not detect the presence of any coastal California gnatcatchers, the habitat will have been confirmed to be unoccupied by coastal California gnatcatchers, and MM BIO-1g has been completed, then ground disturbance or discing may occur during the nesting season (i.e., between March 1 and August 15). In the event that the focused surveys identify the presence of California gnatcatchers, then ground disturbance or discing of the occupied areas shall be prohibited between March 1 and August 15. If an active coastal California gnatcatcher nest is located, the nest site shall be fenced with a buffer of a minimum of 500 feet in all directions, and this area shall not be disturbed until after the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, as confirmed by a qualified biologist. If a nest is suspected, but not confirmed, the Designated Biologist shall establish a disturbance-free buffer until additional surveys can be completed, or until the nest's precise location can be inferred based on observations. If a nest is observed, but thought to be inactive, the Designated Biologist shall monitor the nest for one hour (four hours for raptors during the non-breeding season) prior to approaching the nest to determine status. The Designated Biologist shall use their best professional judgement regarding the monitoring period and whether approaching the nest is appropriate. Project contractors shall be required to ensure compliance with these requirements and permit periodic inspection of the construction site by City of Jurupa Valley staff or its designee to confirm compliance.		
Delhi Sands Flower Loving Fly	**MM BIO-XX**: Prior to grading or other ground-disturbing activities, a qualified biologist shall survey all suitable habitat for Delhi Sands flower loving fly (DSF) according to the United States Fish and Wildlife Service (USFWS) survey protocol for this	Prior to commencing ground- or vegetation	Project Proponent

	species (1996) as revised by USFWS in 2004. The City of Jurupa Valley (City) shall impose conditions of approval on future grading permits requiring focused surveys to be conducted prior to ground disturbance or discing activities. Surveys shall be conducted by the Designated Biologist at the appropriate time of day, and during appropriate weather conditions for DSF flies to be active aboveground. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. Written and mapped qualitative descriptions of plant communities (including dominant species and habitat quality) on and adjacent to the area surveyed will also be provided with survey results to USFWS and California Department of Fish and Wildlife (CDFW), within 45 days following the field surveys, prior to ground disturbing activities. The results of the focused surveys shall be provided to the City, CDFW, and USFWS for review and approval prior to commencement of ground disturbing or discing activities. If the protocol survey determines that some or all of the Delhi sands in the Rio Vista Specific Plan are occupied by the endangered Delhi sands flower-loving fly, then the City should make a determination as to whether or not the MSHCP Plan requires some or all of the occupied areas to be conserved (consistent with DSF conservation strategy "B", the option selected by the City and the other MSHCP Permittees at the inception of the MSHCP Plan in 2004), and adjust the land use of the fly-occupied areas in the Rio Vista Specific Plan, if needed, to become consistent with DSF conservation strategy "B" in the MSHCP Plan, including the recordation of a conservation easement or transfer of fly-occupied areas to be conserved to a qualified wildlife habitat conservation organization, such as the Western Riverside County Regional Conservation Authority, the San Diego Habitats Conservancy, etc.	disturbing activities	

Burrowing Owl	MM-Bio-1i: A) Prior to the issuance of a grading permit, the Planning Department shall verify that the burrowing owl breeding season protocol survey is not more than one year old. If it is older than one year, an updated breeding season protocol survey for burrowing owl shall be conducted within all suitable burrowing owl habitat on the site and a 150-meter buffer. A copy of the report shall be provided to the Planning Department and the two Wildlife Agencies before grading occurs. If one or more owl-occupied burrows are identified by the breeding season protocol survey, then the Project Applicant shall immediately prepare a Burrowing Owl Protection and Relocation Plan (BOPaRP) for review and approval by USFWS and CDFW, without deferring such preparation to a later time, and the 30-day pre-construction burrowing owl survey will no longer be required. The proposed BOPaRP shall be submitted to the two Wildlife Agencies through the City once the City has reviewed the draft BOPaRP. b) If no burrowing owls are detected in the Project vicinity by the most recent breeding-season burrowing owl protocol survey, then, prior to the issuance of a grading permit, a pre-construction burrowing owl survey in accordance with the March 2006 Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area shall be conducted by a qualified biologist no more than 30 days before ground or vegetation disturbance, including grubbing, tree removal, or site watering. The surveys shall be conducted as close to the actual construction initiation date as possible. In addition, a preconstruction survey for burrowing owl shall be conducted within 3 days prior to initiation of Project activities and reported to CDFW. Additionally, if ground-disturbing activities occur, but the site is subsequently left without further disturbance for more than	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

	30 days, a pre-construction survey shall again be necessary to reconfirm that burrowing owls have not colonized the site since it was last disturbed. If no burrowing owls are observed during all the surveys, site preparation and construction activities may begin. If burrowing owls are detected by the pre-construction survey, the Biologist shall notify the City of Jurupa Valley, the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) field office in Palm Springs with written notification sent within 48 hours of detecting the burrowing owls. If owl-occupied burrows are identified on an implementing Project site during the pre-construction survey, the Project Applicant shall not commence activities until the City receives CDFW and USFWS approval of a Burrowing Owl Protection and Relocation Plan, as described below. If owl presence is difficult to determine, a qualified biologist shall monitor the burrows with motion-activated trail cameras for at least 24 hours to evaluate burrow occupancy. The onsite qualified biologist will verify the nesting effort has finished according to methods identified in the Burrowing Owl Protection and Relocation Plan. A copy of the plan shall be provided to the Planning Department. The BOPaRP shall be implemented prior to any construction activities that may disturb burrowing owls. Mitigation shall be based on the following goals and requirements in the Multiple Species Habitat Conservation Plan (MSHCP): 1. If the site contains or is part of an area supporting less than 35 acres of suitable		

	habitat or the survey reveals that the site and the surrounding area supports fewer than three pairs of burrowing owls, on-site burrowing owls shall be passively or actively relocated following accepted protocols. 2. If the project site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is noncontiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs shall be conserved on-site. The qualified biologist and the Project Applicant shall coordinate with the City, CDFW, and USFWS to develop a Burrowing Owl Protection and Relocation Plan to be approved by CDFW and USFWS prior to commencing Project activities. The Burrowing Owl Protection and Relocation Plan shall describe the Project's proposed avoidance, relocation, monitoring, minimization, and/or mitigation actions to protect burrowing owls from harm and to maintain their survival and numbers in the MSHCP Plan Area. The Burrowing Owl Protection and Relocation Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls, or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Protection and Relocation Plan. The City will implement the		

	Burrowing Owl Protection and Relocation Plan following CDFW and USFWS review and approval. If burrowing owls are observed within Project Site(s) during Project implementation and construction, the Project Applicant shall notify the Wildlife Agencies immediately in writing within 48 hours of detection. A Burrowing Owl Plan will be submitted to the Wildlife Agencies for review and approval within two weeks of detection and no Project activities will occur within 1,000 feet of the burrowing owls' burrows until the Wildlife Agencies approves the Burrowing Owl Protection and Relocation Plan. The City shall be responsible for implementing appropriate avoidance and mitigation measures, including burrow avoidance, passive or active relocation, or other appropriate mitigation measures as identified in the Burrowing Owl Protection and Relocation Plan. A final survey report shall be prepared by a qualified biologist documenting the results of the burrowing owl surveys and detailing avoidance, minimization, and mitigation measures. The final report will be submitted to the City and the Wildlife Agencies within 30 days of completion of the survey for mitigation monitoring compliance record keeping.		
Nesting Birds	**Mitigation Measure 1g**: To prevent impacts to nesting birds (including raptors), clearing or other work in native habitats shall be avoided during the nesting season. If work cannot be avoided during this timeframe, a nesting bird survey shall be conducted by a qualified Biologist within 3 days prior to site preparation activities (such as ground disturbance, construction activities, and/or removal of trees and vegetation). The survey results shall be provided to the City's Planning Department and the Project Applicant shall adhere to the following:	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

	1. Applicant shall designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures. 2. Pre-activity field surveys shall be conducted at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of Project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the Project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. If no nesting birds are observed during the survey,-site preparation and construction activities may begin. If an active nest or nesting birds are present, avoidance buffers shall be implemented as determined by a qualified biologist and approved by the City of Jurupa Valley, based on their best professional judgement and experience in accordance with the Migratory Bird Treaty Act (MBTA) regulations and the California Fish and Wildlife Code Sections 3503, 3503.5, and 3513. The Designated Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. The qualified biologist shall halt all		

	construction activities within proximity to an active nest if it is determined that the activities are harassing the nest and may result in nest abandonment or take. Active bird nests shall be mapped utilizing a handheld Global Positioning System (GPS), getting as close as possible without disturbing the nest. The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned. Construction shall not be permitted within buffer areas while the nest continues to be active. Once fledging has occurred or the nest otherwise becomes inactive, no further avoidance shall be required. An active nest is defined as a nest that is being built or in use as part of the reproductive process, including a nest with eggs, chicks, or dependent juveniles. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping. The qualified biologist shall also have the authority to require implementation of avoidance measures related to noise, vibration, or light pollution if indirect impacts are resulting in harassment of the nest. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.		

Crotch's Bumble Bee	**Mitigation Measure BIO-1k**: Because of suitable habitat within the project site, within one year prior to vegetation removal and/or grading, a qualified entomologist familiar with Crotch's bumble bee behavior, as approved by CDFW, and life history conduct surveys in accordance with any Crotch's bumble bee survey protocol provided by CDFW to determine the presence/absence of Crotch's bumble bee. Surveys should be conducted during flying season when the species is most likely to be detected above ground, between March 1 to September 1. Surveys should be conducted within the project site and areas adjacent to the project site where suitable habitat exists. If a colony is present, a 100-foot avoidance buffer shall be established. Survey results, including negative findings, should be submitted to the California Department of Fish and Wildlife (CDFW) prior to project-related vegetation removal and/or ground-disturbing activities. If a survey finds that a Crotch's bumble bee ~~colony~~ is present on the project site or Crotch's bumble bee are observed during Project activities, the project Biologist shall consult with CDFW. The qualified biologist should identify the location of all nests in or adjacent to the Project site. If Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, should expand the buffer zone as necessary to prevent disturbance or take. If the proposed project impacts Crotch's bumble bee, an Incidental Take Permit from the CDFW shall be obtained pursuant to Fish and Game Code section 2081 subdivision (b) and/or other mitigation shall be implemented as required by the CDFW. Any floral resource associated with Crotch's bumble bee that will be removed or damaged by the Project should be replaced at no less than 2:1. Floral resources should be replaced as close to their original location as is feasible. If active Crotch's bumble bee nests have been identified and floral resources cannot be replaced within 200 meters of their original location, floral resources should be	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

	planted in the most centrally available location relative to identified nests. This location should be no more than 1.5 kilometers from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. These floral resources should be maintained in perpetuity and should be replanted and managed as needed to ensure the habitat is preserved.		
Species of Special Concern	**MM BIO-XX:** Scientific Collecting Permit – The City/qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate SSC wildlife and rare plants, and to avoid harm or mortality in connection with Project construction and activities.	Prior to commencing ground- or vegetation disturbing activities	Project Proponent
Species of Special Concern	**MM BIO-1h Biological Monitoring and Clearance Surveys:** Prior to issuance of a grading permit, a qualified Biologist with experience surveying for each of the following species shall be retained: Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Lawrence's goldfinch (*Spinus lawrencei*), northern harrier (*Circus hudsonius*), great egret (*Ardea alba*), Costa's hummingbird (*Calypte costae*), red-diamond rattlesnake (*Crotalus ruber*), orange-throated whiptail (*Aspidoscelis hyperythra),* and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Prior to commencing any Project-related ground-disturbing activities, the qualified biologist should conduct surveys for where suitable habitat is present. Project related activities include construction, equipment and vehicle access, parking, and staging. Focused surveys should consist of daytime surveys and nighttime surveys no more than one month from the start of any ground-disturbing activities. The surveys should include mapping of current locations of special-status wildlife species for avoidance and relocation efforts and to assist construction monitoring efforts. The survey	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

	should be conducted so that 100 percent coverage of the project site and surrounding areas is achieved. In addition, resumes/and or statements of qualifications shall be provided to the City by the applicant identifying one or more qualified Biological Monitors that will be assigned to the project to monitor construction activities. Monitors shall be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, jurisdictional waters, and sensitive or unique biological resources are avoided to the extent possible. The City in consultation with a qualified biologist should prepare a Workers Environmental Awareness Program (WEAP) training prior to implementation of Project ground-disturbing activities. Monitors shall conduct WEAP training to inform construction personnel of applicable mitigation measures and permit conditions, and any potential for infraction and should include effective, specific, enforceable, and feasible actions. The qualified biologist should have prepared maps showing locations where SSC were detected and share this information to workers as part of training. The qualified biologist shall meet with the construction crew at the project site at the onset of construction to educate the construction crew on the following: 1) a review of the project boundaries; 2) all special-status species that may be present, their habitat, and proper identification; and 3) the specific mitigation measures that will be incorporated into the construction effort. The qualified biologist should communicate to workers that upon encounter with a SSC, work must stop, a qualified biologist must be notified, and work may only resume once a qualified biologist has determined that it is safe to do so. Any contractor or employee that inadvertently kills or injures a special-status animal, or finds one either dead, injured, or entrapped, should immediately report the incident to the qualified biologist and/or onsite representative identified in the worker training. The Biological Monitor shall submit a weekly report to		

	the City inspector, and shall promptly identify any concerns or violations, as needed. A Biological Monitor shall be present during initial site clearing activities (vegetation clearing, soil preparation, and ground disturbance), during work adjacent to avoided Delhi soils and jurisdictional waters and Multiple Species Habitat Conservation Plan (MSHCP) Riparian/Riverine habitat, and at appropriate intervals throughout construction to ensure compliance with mitigation measures and regulatory permit conditions. In addition, a qualified Biologist shall conduct clearance surveys for special-status plant or wildlife resources within or adjacent to the project disturbance area within three calendar days prior to initial vegetation clearing and ground disturbance, including fence installation. Daily biological monitoring should be conducted during any activities involving vegetation clearing or modification of natural habitat. Surveys for SSC should be conducted prior to the initiation of each day of vegetation removal activities in suitable habitat. Surveys for SSC should be conducted in the areas flagged in earlier surveys before construction and activities may occur in or adjacent to those areas. Work may only occur in these areas after a qualified biologist has determined it is safe to do so. Even so, workers should be advised to work with caution near flagged areas. If SSC is encountered, qualified biologist should safely protect or relocate the animal per relocation and handling protocols. If any special-status plants or wildlife are found, the Biologist shall take appropriate action as defined in the MSHCP, mitigation measures, permit conditions, and regulations. The qualified biologist should use visible flagging to mark the location where SSC was detected. The qualified biologist should take a photo of each location, map each location, and provide the specific species		

	detected at that location. The qualified biologist should provide a summary report of SSC surveys to the City before any Project-related ground-disturbing activities. The CDFW should be notified and consulted regarding the presence of any special-status wildlife species found on site during surveys. If an Endangered Species Act-listed species is found prior to or during grading of the site, the USFWS should also be notified. If any special-status or listed species are/have been observed on or in proximity to the Project site, Permittee shall submit California Natural Diversity Data Base (CNDDB) forms and maps to the CNDDB within five working days of the sightings. Additional avoidance and minimization measures may need to be developed with CDFW/USFW. Where applicable, wildlife should be protected, allowed to move away on its own (non-invasive, passive relocation), or relocated to adjacent appropriate habitat within the open space on site or in suitable habitat adjacent to the project area (either way, at least 200 feet from the grading limits). Special status wildlife should be captured only by a qualified biologist with proper handling permits. The qualified biologist should prepare a species-specific list (or plan) of proper handling and relocation protocols and a map of suitable and safe relocation areas. The list (or plan) of protocols should be implemented during project construction and activities/biological construction monitoring. The City/qualified biologist may consult with CDFW/USFWS to prepare species-specific protocols for proper handling and relocation procedures. Only a USFWS approved biologist should be authorized to capture and relocate ESA-listed species. A relocation plan should be submitted to CDFW and USFWS for review and comment prior to implementing Project-related ground-disturbing activities. If any SSC are harmed during relocation or a dead or injured animal is found, work in the immediate area should stop immediately, the		

	qualified biologist should be notified, and dead or injured wildlife documented immediately. The qualified biologist should contact the USFWS, CDFW, and the City by telephone by the end of the day, or at the beginning of the next working day if the agency office is closed. In addition, a formal report should be sent to the City, CDFW, and USFWS (as appropriate) within three calendar days of the incident or finding. The report should include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death. Monitoring and survey activities shall be documented, and, summaries shall be submitted on a monthly basis during periods of Project activity until Project completion or monitoring is complete. Monitoring reports of any passively relocated species shall also be included. At-the conclusion of project construction activities, a final construction report shall be submitted to CDFW and the City at least two weeks after the Project is fully completed including color photographs of before and after Project-related activities, including the surrounding staging areas. The construction report at a minimum shall contain pre- Project photographs, total amount of area impacted post-Project, post-Project photographs, and biological survey notes (including construction monitoring). All monitoring reports and communications shall be retained in project files to allow review by the lead agency and Wildlife Agencies.		
Species of Special Concern	**MM BIO-XX: Plummer's Mariposa Lily Mitigation**: Prior to issuance of a grading permit, a botanist experienced in identifying *Calochortus* species in the field shall map the locations of the Plummer's mariposa lilies (*Calochortus plummerae*) inside the Project's anticipated permanent and temporary impact areas during	Prior to commencing ground- or vegetation	Project Proponent

	the month of June (the month when the species is detectable and identifiable in the field), and the Project shall immediately remove the Plummer's mariposa lilies from the impact areas via hand excavation, and transport them to a nursery specializing in the cultivation of native California plants, where the mariposa lilies shall be cared for until cooler weather in Autumn. The salvaged mariposa lilies shall be planted into suitable habitat inside the Project's conservation areas between October and December (the precise timing shall be determined by the horticulturalists at the native plant nursery, but shall be selected to minimize the mortality rate of the transplanted mariposa lilies). The receptor areas shall only consist of areas which will be placed into permanent conservation or is currently conserved via a conservation easement or transfer of title by the Project, and which shall be maintained in perpetuity by a qualified habitat maintenance organization such as the Western Riverside County Regional Conservation Authority, or the San Diego Habitats Conservancy, etc.	disturbing activities	
Noise Pollution	**MM BIO-XX:** Prior to approval of the Final Design, a Noise plan shall be submitted to the City of Jurupa Valley for review and approval. Proposed The Noise Plan shall identify noise generating land uses that may affecting the MSHCP Conservation Area and shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards. The Noise Plan shall include monitoring during construction and post-project to demonstrate noise levels in the Conservation Area do not exceed residential standards. If noise standards are exceeded, the Project Applicant is responsible for immediate implementation of remedial actions to reduce noise levels to acceptable levels.	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

Light Pollution	**MM BIO-XX**: To reduce nighttime artificial lighting-related impacts to wildlife using conservation areas, the Project shall take lightning measurements before, during, and post construction operations to determine impacts of nighttime artificial lightning on adjacent conservation areas and the wildlife it supports. To protect wildlife using conserved areas, project construction and operations shall result in not net increase to pre-construction ambient night-time levels to all areas of conservation areas. If light or glare impacts to conservation areas exceed this threshold, the Project shall make changes to their operations and/or adopt landscape shielding, dimming, lighting curfews or other appropriate measures that result in the Project causing minimal to no glare to all conserved.	Prior to commencing ground- or vegetation disturbing activities	Project Proponent