Fairview Park Master Plan IS/MND (1997) Addendum to the File

Fairview Park Mesa Restoration: Coastal Sage Scrub and Flower Fields Habitat Restoration and Project – Crotch's Bumble Bee and Western Burrowing Owl

An initial study/mitigated negative declaration (IS/MND) was prepared for the originally proposed Fairview Park Master Plan (FPMP) in 1997. Pursuant to California Regs. Tit. 14, §15162(b), if changes to a project or its circumstances occur or new information become available after adoption of a negative declaration, the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

As the lead agency, the City of Costa Mesa determined, based on the habitat restoration plan for the project and guidance from the California Department of Fish and Wildlife, an addendum to the originally adopted IS/MND should be prepared. This Addendum to the IS/MND addresses new information pertaining to the Crotch's bumble bee (CBB, *Bombus crotchii*) and Western Burrowing Owl (BUOW, *Athene cunicularia hypugaea*), both candidate species for listing under the California Endangered Species Act (CESA). Pursuant to this Addendum also discusses the project's avoidance and minimization measures (AMMs) that achieve a long-term net uplift for CBB, BUOW present at the project site.

The FPMP was the subject of an IS/MND adopted by the City of Costa Mesa in 1997. In that document the City determined that the master plan for the 208-acre park is mostly passive with habitat restoration, trails, picnic areas, new parking west of Placentia Avenue, and an expanded model train station and museum area, trails, and picnic areas on the east side.

The IS/MND identifies that the park contains sensitive natural resources as identified in the FPMP. At the time, the list of species of concern did not include CBB, or the fact that BUOW is a candidate for listing under CESA, because the CBB was not a species of concern in 1997, and BUOW was recently listed. The 1997 FPMP includes a discussion of BUOW, which is updated here due to its recent change in listing status.

This Addendum provides a description of the species, the benefits of the project, and the measures to be included in the FPMP activities, including the Coastal Sage Scrub and Flower Fields Habitat Restoration Project to protect the species during restoration actions.

1997 IS/MND Assessment Regarding Impacts to Biological Resources. The IS/MND found that the FPMP was designed with sensitive resources in mind and that no significant adverse impacts are associated with the master plan if the following mitigation measures, which are recommended in the master plan, are kept a part of the project:

> B-1. Any habitat restoration activities shall be carefully planned and implemented according to the Fairview Park Master Plan and in consultation with a biologist familiar with the park's native plant and animal communities.
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> B-2. To avoid potential impacts to sensitive species present or potentially present in the alluvial scrub community depicted on the FPMP, weed control activities (e.g., disking) shall be terminated until a resource management plan has been undertaken.
>
> B-3. Upon approval of the Fairview Park Master Plan, the City shall review current management practices (e.g., weed control, vector control; mowing within vernal pools) to avoid potential impacts to biological resources identified in the master plan as being highly or moderately sensitive.
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> B-4. Development of the park west of Placentia Avenue including trenching for utilities, shall minimize impacts to highly or moderately sensitive resources, retain the natural topography to the extent feasible, and use only locally native plants in restoration and in other landscaping where appropriate. Activities on this side of the park shall be consistent with the NCCP Implementation Agreement if signed by the City of Costa Mesa.

Updated Species Information

Crotch's Bumble Bee

The Crotch's bumble bee (CBB, *Bombus crotchii*) is a candidate for listing under CESA. The CBB occurs in grassland and scrub habitats containing nesting and/or overwintering habitat, and abundant floral resources that provide nectar and pollen during the active flight period (early-February to late-October). The species nests underground in abandoned holes created by small mammals (e.g., ground squirrels, mice, and rats), or occasionally in bird nests, but may also nest under logs and other woody debris; above ground under perennial bunch grasses, brush piles, and thatched annual grasses, and in dead trees or hollow logs (Williams et al. 2014, Xerces Society 2018). Overwintering habitat is largely unknown, but bumble bees have been documented overwintering in burrows of other animals, and in shallow excavations in soft soil, leaf litter, and other debris such as compost piles (Goulson 2010, Williams et al. 2014). Colonies are annual and only newly mated bumble bee queens overwinter

(Thorp et al. 1983). In early spring, queens emerge from their overwintering site to forage on nectar and pollen, and search for suitable nest sites. In general, bumble bee colonies can support anywhere from 50 to 1,000 female workers, as well as males and the queen (Xerces Society 2018).

Based on recent focused surveys, nesting habitat and overwintering habitat are present on the Fairview Park restoration site, and CBB has been observed foraging on-site on native and non-native floral species including native phacelia (*Phacelia* spp.) and salvia species (*Salvia* spp.), and non-native black mustard (*Brassica nigra; synonyms are Rhamphospermum nigrum, Mutarda nigra,* and *Sinapis nigra*) (Endemic Environmental Services 2024).

Burrowing Owl

The burrowing owl (BUOW, *Athene cunicularia*) is a candidate for listing under CESA and a California species of special concern. The burrowing owl nests and roosts in open grasslands and open habitats with suitable burrows, usually those made by California ground squirrels (*Otospermophilus beecheyi*). BUOW use abandoned ground squirrel burrows for shelter and nesting. The breeding season in California is March to August (Shuford et al. 2008). Burrowing owls are not known to nest at Fairview Park; but are known to occupy the Park in the winter.

Proposed Habitat Restoration Project

The Fairview Park Coastal Sage Scrub and Flower Fields Habitat Restoration and Enhancement Project (Project) is a collaborative effort between the City of Costa Mesa (City) and the Orange County Transportation Authority (OCTA) to fulfill an outstanding obligation of restoring approximately 4.5 acres of coastal sage scrub and 5.0 acres of native grassland habitat. In January 2024, the City contracted with MIG (consultant) to prepare a habitat restoration plan for the Project, which was prepared by their subconsultant, Land IQ (2024). The Project is intended, in part, to fulfill outstanding mitigation commitments to OCTA for a total of 23 acres of restoration consisting of various habitat communities in the wetlands and riparian habitat restoration area. As of November 2024, the City has completed 13.5 acres of habitat restoration towards its 23-acre commitment. The Project was designed to accomplish an additional 11.9 acres of habitat restoration, with 9.5 of these acres being in credit to the OCTA Environmental Mitigation Program. In addition, the Project will implement voluntary habitat restoration and enhancement initiatives to augment the conservation value of the site. These measures will not only contribute to the overall success of the Project but also help fulfill the long-term conservation and preservation commitments outlined in the City's adopted FPMP.

Habitat Restoration Project Beneficial Ecological Uplift for CESA-Protected Species

Crotch's Bumble Bee

The Project will improve many environmental factors affecting CESA-protected species, thereby providing ecological uplift. Like all bumble bees, Crotch's bumble bee requires foraging habitat, a place to nest, and a place to overwinter (Hatfield et al. 2012). For CBB, the Project will improve the ability of the site to support all the needs of the bumble bee.

First, the Project will increase the diversity of native flowering species. Increased plant diversity is positively correlated with bumble bee abundance (Mand et al. 2002, Hines and Hendrix 2005) and has been shown to reduce competition for nectar sources with other species that may be better adapted to pollinate one species versus another (Balfour et al. 2021).

Second, the increased plant diversity will also extend the native flower blooming period to encompass the entire CBB flight season, providing critical floral resources (nectar and pollen) during the queen flight season (February to March) as queens emerge from a state of diapause (i.e., a form of hibernation), during the colony active period (April to August), and during the gyne flight season (September to October) when newly-mated queens are building fat reserves to prepare for winter hibernation. The life cycle of CBB begins when queen bees emerge from hibernation each spring (queen flight season), playing a critical role in maintaining the colony's continuity. For the colony's survival and successful reproduction, the availability of sufficient floral resources is essential during the entire flight season. For instance, newly mated queens must build fat reserves before hibernation (gyne flight season) to ensure the emergence of a new generation the following spring (CDFW 2023).

The plant palette for the Project reflects current understanding about the plant species commonly visited by CBB (Exhibit A). For example, of the 14 plant families that are represented in the plant palette, six families are the most commonly visited by CBB, including Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, Hydrophyllaceae, and Lamiaceae (The Xerces Society 2018); and of these families, 24 plant species are represented. Likewise, the palette includes narrow leaf milkweed (*Asclepias fascicularis*), which is an important nectar source for males, and lupines *(Lupinus* spp.), which is an important pollen and nectar source for females *(*CBBA 2025). The pallete also includes plants in the genera *Salvia, Acmispon, and Phacelia*, which have also been shown to be important for the species (CBBA 2025).

Third, the Project will improve and increase nesting and overwintering habitat resources on the site by planting native bunch grasses, which are known to provide bumble bee

nest habitat and the increased diversity of plants is expected to attract a greater abundance of small mammals to the area.

Burrowing Owl

The Project will also have benefits for the BUOW. The removal of the tall-stature non-native species (e.g., mustards, thistles, fennel) and replacement with shorter-statured native species will be beneficial for owls because it will provide more visibility to watch for approaching predators and more easily hunt for prey (CDFW 2024). The diversity of plant food resources and shorter-stature vegetation will also attract California ground squirrels, which are a keystone species in California grassland habitats, upon which BUOW are highly dependent for their burrows. The diversity of plants will provide more diverse food resources that California ground squirrels consume including seeds, fruits, stems, and leaves, and the shorter stature vegetation will provide good visibility of predators. Additionally, the diversity of plants will provide a nearly year-round source of food for BUOW prey species, including in the winter when owls have been observed as present. The increased structural diversity of native shrub and herb life forms will also attract a wider variety of prey species such as insects and small lizards (Curran 2022, Owen et al. 2024).

Avoidance and Minimization Measures for Crotch's Bumble Bee and Burrowing Owl

AMM-1. Qualified Biologist. The City shall ensure that the Qualified Biologist(s) are knowledgeable and experienced in the biology, natural history, and habitat requirements of CBB, including co-occurring bumble bee species, and/or BUOW, with at least two season of experience.

AMM-2. Qualified Biologist Authority. The Qualified Biologist shall immediately stop any activity that does not comply with the AMMs or order any reasonable additional protection measures, in consultation with the City and CDFW, to avoid the unauthorized take of CESA-protected species. The City shall provide unfettered access to the Project Area and otherwise facilitate the Qualified Biologist in the performance of their duties. If the Qualified Biologist is unable to comply with these measures, then they shall notify the City and CDFW immediately.

AMM-3. Education Program. The City shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Qualified Biologist reviewing the sensitive species/resources that could potentially occur in work areas, including but not limited to CBB and BUOW. The program shall include a general discussion of the life history, field identification, habitat requirements, and the legal status for each species.

The Qualified Biologist shall also explain the relevant AMMs as they relate to sensitive biological resources on/around the Project Area and disclose the specific resources that will be monitored. The City shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new individuals before they are authorized to perform work in the Project Area. Upon completion of the program, they shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.

Avoidance and Minimization Measures for Crotch's Bumble Bee

Based on the confirmed presence of CBB on the site, initial dethatching activities and ongoing weed maintenance activities have the potential to destroy active nests and overwintering queens, and result in the temporary loss of foraging habitat. Recognizing that complete avoidance of take is likely not possible, especially in the fall and winter months when overwintering bumble bee queens are undetectable, the following measures will be implemented to minimize Project impacts to CBB and their habitat.

AMM-4. Pre-work Surveys. Pre-work surveys for CBB shall be conducted during the queen flight season, colony active period, and gyne flight season (cumulatively, February 1 through October 31) for various habitat restoration activities with different impact potential. If CBB are found to be present, the Qualified Biologist shall attempt to determine if there is an active nest in the Project Area that necessitates the establishment of a protective avoidance nest buffer.

a. Minimal to No Impact Activities. One pre-work survey shall be conducted when the potential to impact CBB or their habitat is minimal to none. These habitat restoration activities include (i) hand weed control techniques when the weeding event is timed to occur prior to predominantly synchronous flowering (i.e., individual plants in a population may flower earlier but typically most of the plants in a population flower in the same time period) of known CBB floral resources, or (ii) the targeted foliar application of grass-specific herbicides that are approved for use in the habitat restoration plan. Hand weed control techniques include hand-pulling of individual plants and the use of hand picks for cutting weeds at or above the soil surface.

b. Ground Disturbance or Flowering Food Source Removal Activities. Two pre-work surveys shall be conducted prior to Project activities involving ground disturbance (e.g., digging out perennial plants to remove the root system for effective control), the use of motorized mechanical equipment (e.g., line trimmers), the use of vehicles or mechanical tracked equipment, the use of herbicides applied according to a CDFW approved Pesticide Use Plan developed for the Project, or

control of weeds that are in predominantly synchronous flowering that are known CBB floral resources.

c. Survey Guidelines. Surveys shall focus on areas with blooming native and nonnative nectar and pollen sources, including a 50-foot buffer around the work area. Conduct surveys between 8:00 am and 4:00 pm on sunny days with temperatures ranging from 55 to 90°F and wind speeds below 10 mph. Conduct presence/absence detection surveys for a minimum of 1 person-hour for each 3 acres of suitable habitat. For one pre-work survey requirements, conduct surveys no more than 2 days before starting work activities. For two pre-work survey requirements, conduct surveys no more than 10 days before work begins, at least 4 days apart, and with the second survey no more than 2 days before starting work activities.

d. Alternative Monitoring Method for Unfavorable Weather Conditions. The incidence of coastal fog and high prevailing on-shore wind speeds at Fairview Park, can, at times, limit the ability of the Qualified Biologist to complete surveys according to the guidelines before scheduled weed management activities. If weather conditions hinder surveys before Project activities, the Qualified Biologist shall monitor work on the first day of Project activities to detect CBB and nests. This alternative monitoring approach aims to facilitate timely weed control while protecting CBB and their habitat. If CBB is detected while monitoring, the Qualified Biologist shall make every effort to detect a nest in the work area and establish a protective avoidance buffer around the nest. The Qualified Biologist has authority to recommend additional monitoring of Project activities when a survey was unable to be completed prior to start of work. The Qualified Biologist shall collaborate with the Project implementation team to determine optimal timing for maintenance weeding based on CBB activity and relevant AMMs.

e. Locating Nests. If CBB are detected during pre-work surveys or monitoring, then the Qualified Biologist shall make every effort to locate nests in the Project Area.

f. Nest Buffer. If active CBB nests are detected, the Qualified Biologist shall establish protective avoidance buffers around the nest(s). The buffer shall ensure protection of any existing floral resources around the nest and observed flight corridors as determined by the Qualified Biologist. At a minimum, the buffer should provide at least (i) 50 feet of clearance around nest entrances for hand weed control techniques with non-motorized hand tools, or for the targeted foliar application of grass-specific herbicides that are approved for use in the habitat restoration plan, and (ii) 100 feet of clearance around nest entrances for habitat restoration activities that involve motorized tools, ground disturbance, the use of

vehicles or mechanical tracked equipment, or the use of herbicides applied according to a CDFW approved Pesticide Use Plan. The protective avoidance nest buffer may be adjusted as determined by the Qualified Biologist depending on the locations of the floral resources and flight corridors and using the most current and commonly accepted science and published guidance. Work shall not occur within the protective avoidance nest buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days), as determined by the Qualified Biologist. Restoration activities may occur within the 50 to 100-ft nest buffer only if actively monitored by the Qualified Biologist. The Qualified Biologist will observe and assess the behavior of the CBB, including the frequency of entering and exiting the nest, both before and during work. If CBB exhibits significant changes in behavior indicating stress or avoidance during work, then the Qualified Biologist shall stop all work within the buffer zone and consult with CDFW on how to proceed.

g. Reporting. All survey and monitoring findings shall be included in the annual performance monitoring reports for the Project.

AMM-5. Timing of Weed Control. To avoid potential impacts to CBB, weed control shall be timed prior to flowering of weed species that are potential food sources during project weed management activities to the extent possible. And after at least two full years of site preparation and the installation of the native seed mix in a restoration area has occurred per the habitat restoration plan (Land IQ 2024), weeding shall be done primarily by hand pulling or cutting and be timed to occur prior to flowering of the species to be weeded, when feasible.

AMM-6. Use of Grass-Specific Herbicide. The use of post-emergent, grass-specific, bee safe herbicides identified in the habitat restoration plan (Land IQ 2024) are allowed to control nonnative grasses during the site preparation phase (i.e., consistent weed management following the grow-and-kill techniques prior to installation of the native seed mix). Pre-emergent herbicides are not allowed because they may also impact newly germinated native species, hindering natural recruitment or seed mix establishment. This selective approach ensures that herbicides target only intended nonnative grass species while preserving non-target plants, minimizing potential harm to CBB, and safeguarding other pollinator species. Additionally, this approach avoids adverse impacts on plants that offer floral resources to CBB. Only one grass-specific herbicide is allowed, active ingredient fluazifop-p-butyl (e.g., Fusilade®) for foliar applications, following label-recommended rates, to treat nonnative grasses. This herbicide is listed as Green Level III on the University of California's Division of Agriculture and Natural Resources statewide Integrated Pest Management (UC IPM) database, indicating minimal toxicity to bees and requiring no bee-related precautions

(UC IPM database; accessed on January 14, 2025). The residual life of herbicides in soil varies by product and can persist from several months to several years before breaking down into inert compounds. Fluazifop-p-butyl exhibits no soil activity (DiTomaso et al. 2013). Other herbicides for nonnative broadleaf weeds (e.g., thistles and mustards) may be controlled according to a CDFW approved Pesticide Use Plan.

AMM-7. Pesticide Use Plan. The grass-specific herbicide, active ingredient fluazifop-p-butyl, is approved for use during the site preparation phase of the Project prior to installation of the native seed mix. If alternative herbicide products are recommended for weed control during the site preparation phase, the City shall submit a "Pesticide Use Plan to Avoid and Minimize Impacts to Crotch's Bumble Bee" (Pesticide Use Plan) to CDFW for approval before use within the Project area. The Pesticide Use Plan will outline best management practices to avoid and minimize negative impacts to CBB and their habitat, following guidance provided by the Xerces Society, the California Department of Pesticide Regulation, and the UC IPM practices to protect bees. Chemicals known to be toxic to bees shall be avoided (e.g., glyphosate), and applications will be conducted outside the flowering periods of known CBB floral resources and CBB active periods (February 1 through October 31) as much as possible. The Pesticide Use Plan shall include a requirement for the City to maintain records of herbicide applications, including invasive plant species treated, location and area treated, products used, application rate, application volume, and application method.

AMM-8. Insecticide and Soil Fumigant Restriction. The use of insecticides or soil fumigants are prohibited in Fairview Park to avoid the harm caused to non-target wildlife, including CBB. Only insecticides or soil fumigants approved for use in writing by CDFW, with minimal impact on non-target wildlife, may be used.

Avoidance and Minimization Measures for Burrowing Owl

BUOW are not known to nest at Fairview Park; therefore, no impacts to active nests of this species are anticipated. Per Species Protection Measure BIO-11 in the Habitat Restoration Plan, pre-work breeding/nesting bird surveys will be conducted by a Qualified Biologist during the bird nesting season (February 15 to August 31). In the unlikely event that nesting BUOW are discovered, the City shall immediately notify and consult with CDFW and adhere to recommendations for active nest buffers as specified by CDFW, and follow Measure BIO-12, Work Restrictions Near Active Nests, to ensure their protection.

For any overwintering BUOW that may be affected by Project activities near occupied winter burrows, the following Avoidance and Minimization Measures (AMMs) will be put in place to prevent potential impacts.

AMM-9. Pre-work Surveys. To avoid disturbance to BUOW during their non-breeding season, the following pre-work survey and avoidance measures shall be implemented from October 1 to March 31.

a. Survey Guidelines. Two pre-work surveys shall be conducted by the Qualified Biologist within 14 days before work begins, at least 4 days apart, and with the second survey no more than 2 days prior to starting work activities. Surveys shall cover all work areas containing suitable BUOW habitat. In the event of a delay in Project activities leaving the site undisturbed for over 14 days, pre-work surveys must be repeated to confirm that BUOW have not established themselves in the Project Area. If pre-work surveys indicate BUOW absence, Project activities may proceed without additional measures.

b. Burrow Buffer. Upon BUOW detection, a protective avoidance buffer shall be established around their burrow in consultation with CDFW: 100 feet for low disturbance activities (e.g., hand tool use) or 300 feet for high disturbance activities (e.g., heavy equipment operation). Once the Qualified Biologist has confirmed that the BUOW has left the burrow for the season, then Project activities within the buffer area may resume.

c. Monitoring. Once the buffer is established, the Qualified Biologist will monitor Project activities occurring near the avoidance buffer for signs of adverse effects, including distress/disturbance, as needed. If adverse effects are detected, the Qualified Biologist will have the authority to stop any activity per AMM-2.

d. Reporting. All survey and monitoring findings shall be included in the annual performance monitoring reports for the Project.

AMM-10. Rodenticide Restriction. The use of rodenticides is prohibited in Fairview Park to avoid the harm caused to non-target wildlife, including BUOW. Only rodenticides approved for use in writing by CDFW, with minimal impact on non-target wildlife, may be used.

Conclusion

The measures included in the IS/MND, as further elucidated in this addendum, will minimize impacts to CBB and BUOW, and no significant impacts to these species are expected as a result of the implementation of the proposed Coastal Sage Scrub and Flower Fields Habitat Restoration Project, which will ultimately provide ecological uplift to habitat for these species in Fairview Park.

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