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Jan Di Leo  
County of San Luis Obispo Planning and Building  
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Re: Assessment of Potential for 2 Sensitive Bumble Bee Species to occur at 375 Mehlschau Road, Nipomo, San Luis Obispo County. DRC2019-00058. Dear Ms. Di Leo:

This letter provides an assessment of the potential for two sensitive *Bombus* (Bumble bee) species to occur at 375 Mehlschau Road in Nipomo, California (Property). The proposed project (Project) is a cannabis cultivation Conditional Use Permit on approximately 1.3 acres of the 22.3-acre Property. Four *Bombus* species are presently listed as Candidates for Endangered Species under the California Endangered Species Act (CESA): Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis occidentalis*). Franklin's bumble bee and Suckley cuckoo bumble bee do not occur in central or southern California and would not occur on the Property. Therefore, this evaluation focuses on Crotch and Western bumble bees. Our assessment for potential is based on a review of sensitive *Bombus* species occurrence records, species habitat requirements, and the known habitat types and conditions at the Property.

### **Existing Conditions**

Documented habitats occurring within the 22.2-acre Property include fallow fields dominated by wild mustard (*Sinapis arvensis*), disturbed and developed areas, lawn/ornamental, and riparian. Habitats to be impacted by the proposed cannabis cultivation project include fallow field and disturbed areas.

### **Crotch bumble bee**

Crotch bumble bee is known from California, western Nevada, and northern Baja California, Mexico. The species inhabits open grassland and scrub habitats. Requirements for this, as well as all bumble bee species include suitable nesting sites, pollen and nectar sources, and suitable overwintering sites for the queen. In California, the flight period for the Crotch bumble bee queens is approximately February to late October, peaking in early April, with a second pulse in July. The flight period for workers and males is from late March through September with a peak in July (Thorp et al. 1983). In general, bumble bees forage for pollen from a diversity of plants, although individual species can vary greatly in their plant preferences, largely due to differences in tongue

length (Hatfield et al. 2015). Crotch bumble bees are classified as a short-tongued species, whose food plants include *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia* (Williams et al. 2014). Little is known about overwintering for this species, however in general for bumble bees, suitable overwintering sites for queens may include soft, undisturbed soils, leaf litter, or under other debris.

The Property is within the general range for Crotch bumble bee, however the closest reported occurrence of the species to the Property is a historical record from 1939 that was collected 22 miles northeast (CNDDDB #82). The next closest records are from the vicinity of the Cuyama Valley, approximately 27 miles east, and Figueroa Mountain, approximately 34 miles southeast.

It would be unlikely for Crotch bumble bee to occur on the Property due to the lack of undisturbed grassland or scrubland habitats, and the limited suitable nectar and pollen sources onsite.

### **Western bumble bee**

Western bumble bee is known from the Western United States. Within California, the species range extends from the Oregon border south, through central California along the Coast and Sierra Nevada mountain ranges. The species occurs in meadows and grasslands and has been documented to nest in underground cavities, such as old animal burrows, as well as in logs and railroad ties (Hobbs 1968; Thorp et al. 1983; Macfarlane et al. 1994). Little is known about the ecology of queen bee overwintering sites. Western bumble bee is a short-tongued species whose food plants include *Melilotus*, *Cirsium*, *Trifolium*, *Centaurea*, *Chrysothamnus*, *Eriogonum*, *Solidago*, *Cenaothus*, and *Penstemon*. In California, the flight period for the queen is approximately February through November, peaking in late June and late September, while the flight period for workers and males is April through November, peaking in August and September (Thorp et al. 1983).

The only record of Western bumble bee within San Luis Obispo County is a 1936 record near Avila Beach (CNDDDB #279). This record is approximately 14 miles northeast of the Property. There are no records of the species within Santa Barbara County. The Property is situated at the southernmost end of the species range.

It would be unlikely for western bumble bee to occur on the Property due to the lack of appropriate undisturbed meadow or grassland habitat and the limited suitable nextar and pollen sources onsite.

### **Conclusion**

Focused surveys for CESA Candidate *Bombus* species have not been conducted on the Property. However, the disturbed condition of the Project site suggests very low potential for foraging bumble bees and likely no suitable nesting or overwintering habitat for queen bees.

### **References**

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Sincerely,



Jason Dart

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c/o Jessica Miller and Ian McCarville