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GAVIN NEWSOM, Governor  
CHARLTON H. BONHAM, Director



Governor's Office of Planning & Research

October 12, 2020  
Sent via email

**Oct 13 2020**

## STATE CLEARINGHOUSE

Laura Petro  
California Department of Food and Agriculture  
1220 N Street, Room 221  
Sacramento, CA 95814  
[lpetro@cdfa.ca.gov](mailto:lpetro@cdfa.ca.gov)

Subject: Notice to Amend the Notice of Treatment for Asian Citrus Psyllid

Dear Laura Petro:

The California Department of Fish and Wildlife (CDFW) received the California Department of Food and Agriculture (CDFA) Official Notice to Amend the Notice of Treatment (referred herein as 'Notice') for Asian Citrus Psyllid (ACP) *Diaphorina citri Kuwayama*, within Highland, Mentone, and Redlands ('Project'). CDFW has taken this opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

### PROJECT DESCRIPTION SUMMARY

Between December 3, 2019 to June 15, 2020, the CDFA confirmed the presence of ACP in the Cities of Highland, Mentone, and Redlands, San Bernardino County. In accordance with integrated pest management principles, CDFA has proposed to implement a treatment plan for the ACP infestation (herein referred to as 'Treatment Plan') within a 400-meter radius of each detection site (See Attachment 1), as follows:

- Tempo® SC Ultra (cyfluthrin), a contact insecticide for controlling the adults and nymphs of ACP, will be applied from the ground using hydraulic spray equipment to the foliage of host plants; and
- Merit® 2F or CoreTect™ (imidacloprid), a systemic insecticide for controlling the immature life stages of ACP, will be applied to the soil underneath host plants. Merit®2F is applied from the ground using hydraulic spray equipment. CoreTect™, which is used in place of Merit® 2F in situations where there are environmental concerns about soil surface runoff of liquid Merit® 2F, is applied by inserting the tablets into the ground and watering the soil beneath the host plants.

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## BACKGROUND

The CDFA prepared a Statewide Plant Pest Prevention and Management Program Environmental Impact Report (PEIR December 2014; State Clearinghouse No. 2011062057) that analyzed ACP treatment at the program level and provided guidance on future actions in accordance with Public Resources Code, Sections 21000 et seq. It also identified mitigation measures and integrated pest management techniques that have been incorporated into the Notice.

According to the Draft PEIR (Volume 1. Main Body Section 6.3 Biological Resources) Mitigation Measure BIO-CHEM-2, habitats used by special-status species will be protected as follows:

*“CDFA shall identify any suitable habitat for special-status wildlife species identified as having potential to (1) occur in the region and (2) be affected by the treatment scenario in question. Suitable habitat may consist of aquatic or terrestrial foraging habitat. If such habitat exists, CDFA would prepare treatment plans that will avoid or minimize substantial adverse effects on special-status species and submit them to USFWS, CDFW, and NMFS for review. This may be done on a project-specific basis (for individual applications) or for an entire quarantine area. Treatment plan measures may include modifications in the timing, locations, and/or methods for chemical treatments on a case-by-case basis, including establishment of site-specific buffers. The technical assistance process has been designed so that no “take” authorization will be needed.*

*The treatment plan requirements will be provided to those implementing the treatments. In the case of quarantines, the requirements will be attached to the compliance agreement between CDFA and regulated entities (e.g., growers) affected by the requirements (e.g., those who may treat in proximity to suitable habitat for special-status species). CDFA shall document the results of the USFWS, CDFW, and NMFS coordination, and shall maintain records of compliance with the measures to protect special-status species”.*

Additionally, the Final PEIR (Volume 5 Reponses to Comments) contains a comment letter (#200011; Attachment 2) from the United States Fish and Wildlife (Carol Roberts; USFWS) expressing the need for continued coordination between CDFA and the Wildlife Agencies (Comment and Response #200011-1). CDFA Response to the USFWS Mitigation Measure BIO-CHEM-2 Comment (# 200011-4) states:

***“CDFA would always reach out to the Wildlife Agencies to obtain technical assistance, except for instances when CDFA has determined that no potential exists for adverse impacts on special-status species, or where such impacts would be discountable (emphasis added). In addition, instances may occur where CDFA reaches out to the Wildlife Agencies but does not receive a response. In***

*these cases, CDFA may choose to move forward with its activities based on the protective measures it has developed. As the CEQA lead agency for the Proposed Program, DCFW has the discretion to independently determined whether its actions have potential to result in significant impacts on special-status species, and what measures are necessary to ensure that impacts under CEQA are not significant. That said, to date, CDFA has never conducted its activities in a manner with which the Wildlife Agencies disagreed, and anticipates continuing this positive relationship during implementation of the Proposed Program”.*

Lastly, the Notice contained findings from the Treatment Plan that implied that “CDFA has consulted with the California Department of Fish and Wildlife’s California Natural Diversity Database for threatened or endangered species, the United States Fish and Wildlife Service, the National Marine Fisheries Service and the California Department of Fish and Wildlife when rare and endangered species are located within the treatment area. Mitigation measures for rare and endangered species will be implemented as needed”.

CDFW would like a better understanding of CDFA’s coordination and consultation process, and how CDFW can assist in identifying areas of biological concern. For instance, the Notice provided identified treatment within areas that could be occupied by San Bernardino kangaroo rat, a candidate for listing under the California Endangered Species Act (CESA). CDFW is concerned that potentially occupied habitat could have been overlooked and would appreciate an opportunity to review the specific treatment areas and provide recommendations for avoidance of sensitive species, if necessary. Without having specific treatment location information, CDFW is providing the following comments and technical assistance below to assist CDFA in adequately identifying the Project’s significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.

## **COMMENTS AND RECOMMENDATIONS**

### **Assessment of Biological Resources**

#### *Environmental*

To minimize any adverse impacts from the application of Tempo® SC Ultra, Merit 2F, and CoreTect™ within sensitive areas, CDFA has proposed to 1) follow the pesticide labels; 2) apply treatment only to residential properties, common areas within residential development, non-agricultural commercial properties, and rights-of-way; and 3) not spray any chemicals into bodies of water or undeveloped areas of native vegetation. After reviewing the California Department of Pesticide Regulation Pesticide Regulation's Endangered Species Custom Realtime Internet Bulletin Engine (PRESCRIBE) Data Source website for the pesticides that will be used within the Project footprint, CDFW has some concerns.

CDFW is aware that PRESCRIBE utilizes the habitat data from the California Natural Diversity Database (CNDDDB), and that the pesticide toxicology follows the United States Environmental Protection Agency's standards and advice of the CDFW Pesticide Investigations Unit; regardless, there were some inconsistencies. While the generic labels (Tempo® SC Ultra, Merit 2F, and CoreTect™) have "no pesticide use limitations to listed species" in the Project footprint, different results were obtained when the active ingredients, cyfluthrin and imidacloprid, were looked at. Although Merit 2F or CoreTect™ did not have any warnings, imidacloprid, the systemic insecticide found within these labels, is known to be highly soluble in water (Tomlin 1997) and is on the "Ground Water Protection List". Further, imidacloprid is not easily biodegradable and accumulates in sediments, with a half-life of one to six months in soil, depending on temperature and pH conditions (Wood and Goulson 2017). Given this, CDFW is concerned about the ability of this insecticide to persist in the physical environment (e.g., groundwater, pooled water, and substrate) long-term.

#### *Sensitive Resources - Insects*

Within the PEIR (Impact BIO-CUM-3), it states that the "*Special-status pollinators are adversely affected by complex interactions among multiple stressors, including pests and pathogens, poor nutrition resulting from loss of foraging habitat, pesticide exposure, and overall habitat loss.... As described in that impact discussion, CDFA would implement various avoidance and minimization measures as part of the Proposed Program (including the MPs discussed in Chapter 2, Proposed Program Description and the pollinator measures included in Attachment 1 of Appendix K). These measures would minimize potential adverse effects on pollinators. In addition, the Proposed Program would reduce the potential for pests to have a negative impact on special-status pollinators, which is a beneficial effect. No measurable adverse effects from the Proposed Program on special status pollinators are anticipated*".

Cyfluthrin and imidacloprid are both identified by the National Pesticide Information Center (National Center) to be 'very harmful' to bees. Similarly, the University of California Division of Agriculture and Natural Resource Statewide Integrated Pest Management Program (UC IPMP) also lists these insecticides as being highly toxic to bees. The UC IPMP warns, "*Unlike older pesticides that evaporate or disperse shortly after application, neonicotinoids are systemic poisons. Applied to the soil or doused on seeds, neonicotinoid insecticides incorporate themselves into the plant's tissues, turning the plant itself into a tiny poison factory emitting toxin from its roots, leaves, stems, pollen, and nectar. In Germany, France, Italy, and Slovenia, beekeepers' concerns about neonicotinoids' effect on bee colonies have resulted in a series of bans on the chemicals. In the United States, regulators have approved their use, despite the fact that the Environmental Protection Agency's standard method of protecting bees from insecticides — by requiring farmers to refrain from applying them during blooming times when bees are most exposed — does little to protect bees from systemic pesticides*".

In the PEIR (Appendix K Potential Effects of Pesticide Use and Other Stressors on Pollinators and Associated Biological Resources), pollinators are defined as “*honey bees (Apis mellifera), native bees, birds, and other insects or small, some of which are listed under the federal Endangered Species Act.*” Specifically, twelve federally endangered/threatened species, or special-status pollinators, were recognized, including ten butterflies, a moth (Kern primrose sphinx moth), and fly (Delhi sand flower loving fly). In this case, CDFW is concerned about the Crotch bumblebee (*Bombus crotchii*), which is listed on the International Union for the Conservation of Nature (IUCN) Bumblebee Specialist Group Red List as Endangered, a CNDDDB State Ranking of S1S2 (S1: Critically Imperiled and S2: Imperiled), and a recent candidate for listing under CESA.

Crotch bumblebees are generalist foragers and have been reported visiting a wide variety of flowering plants. Very little is known about the hibernacula, or overwintering sites, and nesting habitat utilized by this species. Generally, bumblebees overwinter in soft, disturbed soil, under leaf litter, or other debris; while nesting sites include underground abandoned rodent cavities or above ground in clumps of grasses (Williams et al. 2014). Thus, both nesting and overwintering sites could occur within the Project footprint.

Whereas Appendix K contains the potential effects and impacts on agricultural and commercial bees, CDFW could only distinguish a few more broadly based measures that could be effective on minimizing impacts to wild and native pollinators (e.g., checking host material before applying treatments for presence of pollinators). Alternatively, more activities were proposed that may benefit native bees, including the following:

- Coordinate with University and Extension experts on more materials for Education and Outreach on Bee Biology and Management.
- Coordinate with Cal Trans, and a management, and conservation agencies to provide access for bees to native forage.
- Coordinate with other agencies and promote awareness of need for access to more forage for native pollinators.
- Provide outreach and education about access to clean water for bees.
- Promote the protection of wild and native pollinators by education, outreach and coordination with native pollinator experts.
- Encourage permitting of native pollinators.
- Work collaboratively with State Apiary Board to make recommendations regarding funding of pollinator health research through sources of available funding including federal and State grant programs.
- Create an enhanced checklist for treatment crews that includes a pollinator awareness.

- Enhance Pest Exclusion Webpage to include more information on pollinators to expand access to information and easy registration.
- Create a Plant Health Division Webpage and list serve.

CDFW recommends that CDFA identify specific mitigation measures that are appropriate, feasible, and enforceable to avoid or minimize potential impacts to state sensitive invertebrates. CDFW would also like to understand which of the aforementioned activities have been performed and assist and coordinate, where appropriate, on others that have yet to be completed. CDFW recommends that specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355).

#### *Sensitive Resources - Bats*

The PEIR (Impact BIO-CHEM-3) states “*The effects on special-status insectivores from scenarios with elevated risk to insects (Less than Significant). However, the risk to non-target insects would not result in a substantial reduction in the food base for special-status insectivores. All scenarios would be implemented in existing residential, agricultural, or nursery settings that would not provide high-quality habitat and frequently would be disturbed by human activity. These settings would be less likely to be used by special-status insectivores. Therefore, the impact would be less than significant*”.

CDFW is concerned about the Project impacts to insectivores, particularly bats. Of the 25 species of bats in California, 24 have been detected in the south coast ecoregion, and several may roost or forage within the treatment areas identified in your Notice. Many of these species appear to have experienced population declines in the ecoregion, and 16 are officially recognized as federally and state sensitive.

For mammals, the National Center asserts that based on cyfluthrin’s chemical properties, it may have the potential to build up and imiacloprid may cause reproductive effects and problems in young where mothers have been exposed. More specifically, the physiological and behavioral aspects of bat ecology can increase the risk of chemical accumulation. Whether bats drink from a polluted source of pooled water, indirectly ingest toxins that may have bio-accumulated within their insect prey while drinking (e.g. insect larvae feed on microorganisms in polluted pools of water) or foraging, bats may have a higher susceptibility to insecticides.

Bats can be long-lived ( $\pm$  30 years), and often eat their body weight of insects every day. This is particularly true in demanding phases of their life cycle, such as lactation, when females may consume up to 130% of their body mass (Kurta, 1989). Since the young have a very high relative energy need, chemical residues may be ingested by the young during lactation. Bats also use fat storage to support both daily and seasonal

patterns of torpor and arousal (Willis, 2017); therefore, their rapid mobilization of these fat reserves may increase their risk from internal exposure to chemicals. Further, given the water losses that can occur during roosting and flight (Rainho and Palmeirim, 2011), drinking water can also constitute a potential chemical exposure route.

Limited studies have looked at the effects of pyrethroids and neonicotinoids on bats, but recent outcomes have shown bat carcasses and guano contained pyrethroids (Eidels et al., 2016) and exposure to imidacloprid resulted in neurological effects, including significantly altered flight paths due to neural impairment in areas of the brain that are important for echolocation (Hsiao et al., 2016). Given these findings, CDFW believes the cumulative impacts of continual, or long-lasting, insecticides could be significant. CDFA should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, as well as assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Project within this and other treatment areas.

#### *Sensitive Resources – Small Mammals*


CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to California Endangered Species Act (CESA). San Bernardino Kangaroo Rat (SBKR), *Dipodomys merriami parvus*, became a candidate species under CESA on August 21, 2019. As a candidate species, SBKR has full protection under CESA.

Although, in general, SBKR are expected to occur in alluvial sage scrub, they can be variable in their distribution. Remnant, isolated habitat patches, as well as, areas located outside of the 100-year floodplain, but still connected to the larger population of SBKR within the Santa Ana River, may be occupied by SBKR if the appropriate sandy substrate is present. These potential areas include fallow fields, citrus groves, and rights-of-way within the Project footprint (See Attachment 3). CDFW is concerned that the treatment areas may fall within occupied SBKR habitat, but if not defined as such by CNDDDB, that CDFA may have overlooked this. CDFW would like to coordinate further on the specific treatment areas, and assist in the identification of potentially occupied habitat. If the Project has the potential to collapse day and home burrows and food caches during treatment application, cause short and long-term contaminate to the substrate, plants, and/or seeds, or result in “take” (California Fish and Game Code Section 86 defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”), CDFW would recommend that a CESA Incidental Take Permit (ITP) be obtained. “take”. For more information, please refer to the CDFW website at: <https://wildlife.ca.gov/Conservation/CESA/Permitting/Incidental-Take-Permits>

## CONCLUSION

CDFW appreciates the opportunity to comment on the Notice to Amend the Notice of Treatment for Asian Citrus Psyllid and would appreciate further coordination and consultation regarding specific treatment areas and measures proposed to avoid and/or minimize impacts to special-status species. If you should have any questions pertaining to the comments provided in this letter, please contact Kim Romich, Senior Environmental Scientist, Specialist, at (760) 938-1380 or at [Kimberly.Romich@wildlife.ca.gov](mailto:Kimberly.Romich@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
 for  
84F92FFEEFD24C8...

Scott Wilson  
Environmental Program Manager

### Attachments:

- Attachment 1 – Project footprint
- Attachment 2 – United States Fish and Wildlife Service comment letter (#200011)
- Attachment 3 – San Bernardino kangaroo rat potential areas with the Project

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