## CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE

**OFFICIAL NOTICE**
**FOR THE CITY OF CUPERTINO**
**PLEASE READ IMMEDIATELY**

### NOTICE OF TREATMENT FOR THE ORIENTAL FRUIT FLY

Since June 23, 2015, six male oriental fruit flies (OFF), *Bactrocera dorsalis* (Hendel) group, have been trapped in the city of Cupertino, Santa Clara County. Based on the survey data, pest biology, information from the California Department of Food and Agriculture (CDFA) *Bactrocera* Science Advisory Panel (BacSAP), recommendations provided by the CDFA Primary State Entomologist, and the CDFA "Action Plan for Methyl Eugenol Attracted Fruit Flies including Oriental Fruit Fly *Bactrocera dorsalis* (Hendel)," the CDFA concludes that an infestation of OFF exists in the area.

A Program Environmental Impact Report (PEIR) has been certified which analyzes the OFF treatment program in accordance with Public Resources Code, Sections 21000 et seq. The PEIR is available at http://www.cdfa.ca.gov/plant/peir/. The treatment activities described below will be consistent with the PEIR.

In accordance with integrated pest management principles, the CDFA has evaluated possible eradication methods and determined that there are no cultural or biological methods available to eradicate OFF. The CDFA will employ chemical control as the primary tool, and will additionally use physical control via host fruit removal when there is evidence that a breeding population exists on a property.

The treatment plan for the OFF infestation will be implemented as follows:

- The male attractant treatment (MAT) will be applied within 1.5 miles of each detection site. MAT uses small amounts of the attractant methyl eugenol and the pesticide naled (Dibrom® Concentrate) mixed into a clay matrix (Min-U-Gel® 400) to lure the male flies to bait stations. A second MAT product is undergoing logistical testing as a replacement for the current mixture. This product is STATIC™ Spinosad ME, a pre-mixed solution of methyl eugenol, spinosad, and SPLAT®, and may be used in place of the naled product in some instances. The male flies are killed before they can mate with the females. This disrupts the breeding cycle and the population is eliminated. Spot applications of approximately five milliliters will be applied to utility poles, street trees, and other unpainted surfaces using pressurized tree marking guns within a nine-square mile area (1.5-mile radius) around each OFF detection site. The bait stations are placed six to eight feet above the ground and out of the reach of the public and pets. Applications are repeated every two weeks for one life cycle if no quarantine is triggered (typically two to three months), and for two life cycles if a quarantine is triggered (typically four to six months). Life cycle durations are dependent on temperature.

- If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults are detected), foliar bait treatments may be used within 200 meters of each detection site in order to mitigate the spread of OFF by eliminating those adult life stages not directly affected by MAT (i.e., females and sexually immature

males). Foliar bait ground treatments are a protein bait spray that contains an organic formulation of the pesticide spinosad (GF-120 NF Naturalyte® Fruit Fly Bait), and are repeated every seven to 14 days for one life cycle of the fly (typically two to three months, dependent on temperature). Please visit the CDFA website to learn more about the treatment process at http://www.cdfa.ca.gov/plant/videos/spinosad/.

- If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults), all host fruit from each detection site and all properties within a minimum of 100 meters of each detection site may be removed and disposed of in a landfill in accordance with regulatory protocols. Fruit removal will occur once at the beginning of the project, but may be repeated if additional flies are detected.

**Public Notification:**
Any resident whose property will be treated via foliar bait sprays or host fruit removal will be notified in writing at least 48 hours in advance of any treatment, in accordance with FAC Section 5779. Following the treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to any fruit on the property. For MAT applications in public areas, notification is given to the general public via mass media outlets such as newspapers or press releases, and information is posted on the CDFA website at http://www.cdfa.ca.gov/plant/PDEP/treatment/oriental_ff.html. Information concerning the OFF project will be conveyed directly to concerned local and State political representatives and authorities via letters, emails, and/or faxes. Press releases, if issued, are prepared by the CDFA information officer and the county agricultural commissioner, in close coordination with the project leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media.

For any questions related to this program, please contact the CDFA toll-free telephone number at 800-491-1899 for assistance. This telephone number is also listed on all treatment notices.

Enclosed are the findings regarding the treatment plan and a map of the treatment area.

Attachments

# FINDINGS REGARDING A TREATMENT PLAN FOR THE ORIENTAL FRUIT FLY

Since June 23, 2015, six male oriental fruit flies (OFF), *Bactrocera dorsalis* (Hendel) group, have been trapped in the city of Cupertino, Santa Clara County. Based on the survey data, pest biology, information from the California Department of Food and Agriculture (CDFA) *Bactrocera* Science Advisory Panel (BacSAP), recommendations provided to me by the CDFA Primary State Entomologist, and the CDFA "Action Plan for Methyl Eugenol Attracted Fruit Flies including Oriental Fruit Fly *Bactrocera dorsalis* (Hendel),'" I have determined that an infestation of OFF exists in the area.

The OFF is an exotic insect originating in Asia, and has been accidentally introduced into a number of Pacific Islands, including Hawaii. It is a member of a closely related group of species, known as the OFF group, which are difficult to distinguish based on individual specimens. Several of the group species are major fruit and vegetable pests, and collectively members of the OFF group are known to attack over 230 types of fruits and vegetables. Important California crops at risk include pome and stone fruits, citrus, dates, avocados, and many vegetables, particularly tomatoes and peppers. Damage occurs when the female lays eggs in the fruit. These eggs hatch into larvae, which tunnel through the flesh of the fruit, making it unfit for consumption. This pest presents a major threat to a wide variety of California produce, with the combined 2012 gross value of these commodities of over $15.2 billion. The permanent establishment and spread of this pest would result in increased production and postharvest costs to safeguard commercial fruit from infestation, increased pesticide applications on both production agriculture and residential properties to mitigate damage, and lost economic activity and jobs from trade restrictions imposed by the United States Department of Agriculture (USDA) and foreign trade partners.

This decision to proceed with treatment is based upon a realistic evaluation that it will be possible to eliminate OFF from this area and prevent its spread using currently available technology in a manner that is based on an action plan developed in consultation with the Pest Prevention Committee of the California Agricultural Commissioners and Sealers Association, the USDA, and scientists on the BacSAP. Due to the size of the infested area and the number of flies detected, historical data indicates that eradication is possible. The first California OFF detections occurred in Orange and Santa Barbara counties in 1960, and since that time, multiple re-introductions have been delimited and successfully eradicated. In making this decision, the CDFA has evaluated possible treatment methods. In accordance with integrated pest management principles, the following is the list of options that I have considered for the treatment of this OFF infestation:
1) physical controls; 2) cultural controls; 3) biological controls; and 4) chemical controls.

Based upon input from my professional staff and outside experts familiar with OFF, I have concluded that there are no cultural or biological control methods that are effective to treat the OFF that allow the CDFA to meet its statutory obligations. To eradicate OFF, I am ordering that male attractant treatments, consisting of methyl eugenol, a pesticide (naled), and a thickener be applied to utility poles and street trees to eliminate this infestation. Additionally, in the event of evidence of a breeding population on a property, foliar bait spray treatments will be applied to host trees using ground-based equipment and host fruit removal will occur. Descriptions of these options are below. The options selected are a chemical-control measure that involves the use of insecticides targeting the adult stage and a physical-control measure targeting the eggs and larvae. These options were selected based upon biological effectiveness, minimal public intrusiveness, cost, and minimal impacts to the environment.

A Program Environmental Impact Report (PEIR) has been prepared which analyzes the OFF treatment program in accordance with Public Resources Code (PRC), Sections 21000 et seq. The PEIR was certified in December 2014, and is available at http://www.cdfa.ca.gov/plant/peir/. The PEIR addresses the treatment of the OFF at the program level and provides guidance on future actions against the OFF. It identifies feasible alternatives and possible mitigation measures to be implemented for individual OFF treatment activities. The OFF program has incorporated the mitigation measures and integrated pest management techniques as described in the PEIR. In accordance with PRC Section 21105, this PEIR has been filed with the appropriate local planning agency of all affected cities and counties. No local conditions have been detected which would justify or necessitate preparation of a site specific plan.

**Sensitive Areas**

The treatment area has been reviewed by consulting the California Department of Fish and Wildlife's California Natural Diversity Database for threatened or endangered species. The CDFA also consults with 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 will be implemented as needed. The CDFA will not apply pesticides to bodies of water or undeveloped areas of native vegetation. All treatment will be applied to residential properties, common areas within residential development, non-agricultural commercial properties, and right-of-ways.

**Work Plan**

The treatment program area encompasses those portions of Santa Clara County which fall within 1.5 miles around each property on which an OFF has been detected and any subsequent detection sites within the program boundaries. A map of the project boundaries is attached. The work plan consists of the following elements:

1. Delimitation. Traps will be placed throughout the project area to delimit the infestation and to monitor post-treatment OFF populations. The cardboard Jackson sticky trap is baited with the attractant methyl eugenol mixed with the pesticide naled (Dibrom® 8 Emulsive), and the McPhail trap is an invaginated glass flask baited with Torula yeast and borax in water. The Jackson trap is strongly attractive to sexually maturing males, while the McPhail trap is attractive to both sexes of the fly. Jackson traps and McPhail traps will each be placed at a density of 25 per square mile within a 0.5-mile radius of each detection site, and Jackson traps will be placed at a density of five per square mile in the remaining delimitation area going out to 4.5 miles from each detection site. Additional traps may be added to further delimit the infestation and to monitor the efficacy of treatments. These traps will be serviced on a regular schedule for a period equal to three OFF generations beyond the date of the last OFF detected. In addition, host fruit may be sampled for the presence of eggs and larvae in a 200-meter radius around each detection property.

2. Treatment. Any OFF detections within the original and/or expanded eradication area(s) will be treated according to the following protocol.

    - The male attractant technique (MAT) will be used to eradicate all sexually-mature male OFFs. The MAT makes use of small amounts of the attractant methyl eugenol mixed with the pesticide naled (Dibrom® Concentrate), and incorporated into a clay matrix

(Min-U-Gel® 400) to lure the male flies to bait stations. A second MAT product is undergoing logistical testing as a replacement for the current mixture. This product is STATIC™ Spinosad ME, a pre-mixed solution of methyl eugenol, spinosad, and SPLAT®, and may be used in place of the naled product in some instances. The flies are killed when they feed at the stations. In each square mile within the eradication boundary, a targeted density of 600 evenly spaced five-milliliter bait stations are applied to utility poles, street trees, and other unpainted surfaces using pressurized tree marking guns mounted on specially modified trucks. The bait stations are placed six to eight feet above the ground. The size of the eradication area is defined as that area within 1.5 miles of each detection site, squared off to create a nine-square mile block, and adjusted to use existing features as boundaries, such as roads. Applications are repeated every two weeks for one life cycle if no quarantine is triggered (typically two to three months), and for two life cycles if a quarantine is triggered (typically four to six months). Life cycle durations are dependent on temperature.

- If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults are detected), foliar bait treatments will be used within 200 meters of each detection site in order to mitigate the spread of OFF by eliminating those adult life stages not directly affected by MAT (i.e., females and sexually-immature males). The foliage of host trees and shrubs within 200 meters of each detection site will be treated with an organic formulation of spinosad bait spray (GF-120 NF Naturalyte® Fruit Fly Bait) using hand spray or hydraulic spray equipment. Treatments are repeated every seven to 14 days for one life cycle of the fly (typically two to three months, dependent on temperature).

- If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults are detected), all host fruit from each detection site and all properties within a minimum of 100 meters of each detection site will be removed and disposed of in a landfill in accordance with regulatory protocols. Fruit removal will occur once at the beginning of the project, but may be repeated if additional flies are detected.

**Public Information**

Residents of affected properties will be invited to a public meeting where officials from the CDFA, the California Department of Pesticide Regulation, the Office of Environmental Health Hazard Assessment, and the county agricultural commissioner's office will be present to address residents' questions and concerns. Residents are notified in writing at least 48 hours in advance of any treatment in accordance with the Food and Agricultural Code (FAC), Section 5779. Following the treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to any fruit on the property. Information concerning the OFF program will be conveyed directly to local and State political representatives and authorities via letters, emails, and/or faxes. Treatment and other information is posted at http://www.cdfa.ca.gov/plant/pdep/treatment/oriental_ff.html. Press releases, if issued, are prepared by the CDFA information officer and the county agricultural commissioner, in close coordination with the program leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media.

For any questions related to this program, please contact the CDFA toll-free telephone number at 800-491-1899 for assistance. This telephone number is also listed on all treatment notices.

**Duty to Act**

Under my statutory authority, as Secretary of the California Department of Food and Agriculture, I have decided, based upon the likely environmental and economic damage that would be inflicted by an established infestation of the OFF in this area, that it is incumbent upon me to attempt to address this threat.

My duty to act, and this decision, is based upon authority set forth in Sections 24.5, 401.5, 403, 407, 408, 5401-5405, and 5761-5764 of the FAC, authorizing and mandating the Secretary to: thoroughly investigate the existence of the pest; determine the probability of the pest spreading to other areas; adopt regulations (Title 3 of the California Code of Regulations, Section 3591.2) as are reasonably necessary to carry out the provisions of this code; abate a pest from the established treatment area; and, to prevent further economic damage. The project work plan above describes the CDFA's actions that are necessary to mitigate the effects of this pest.

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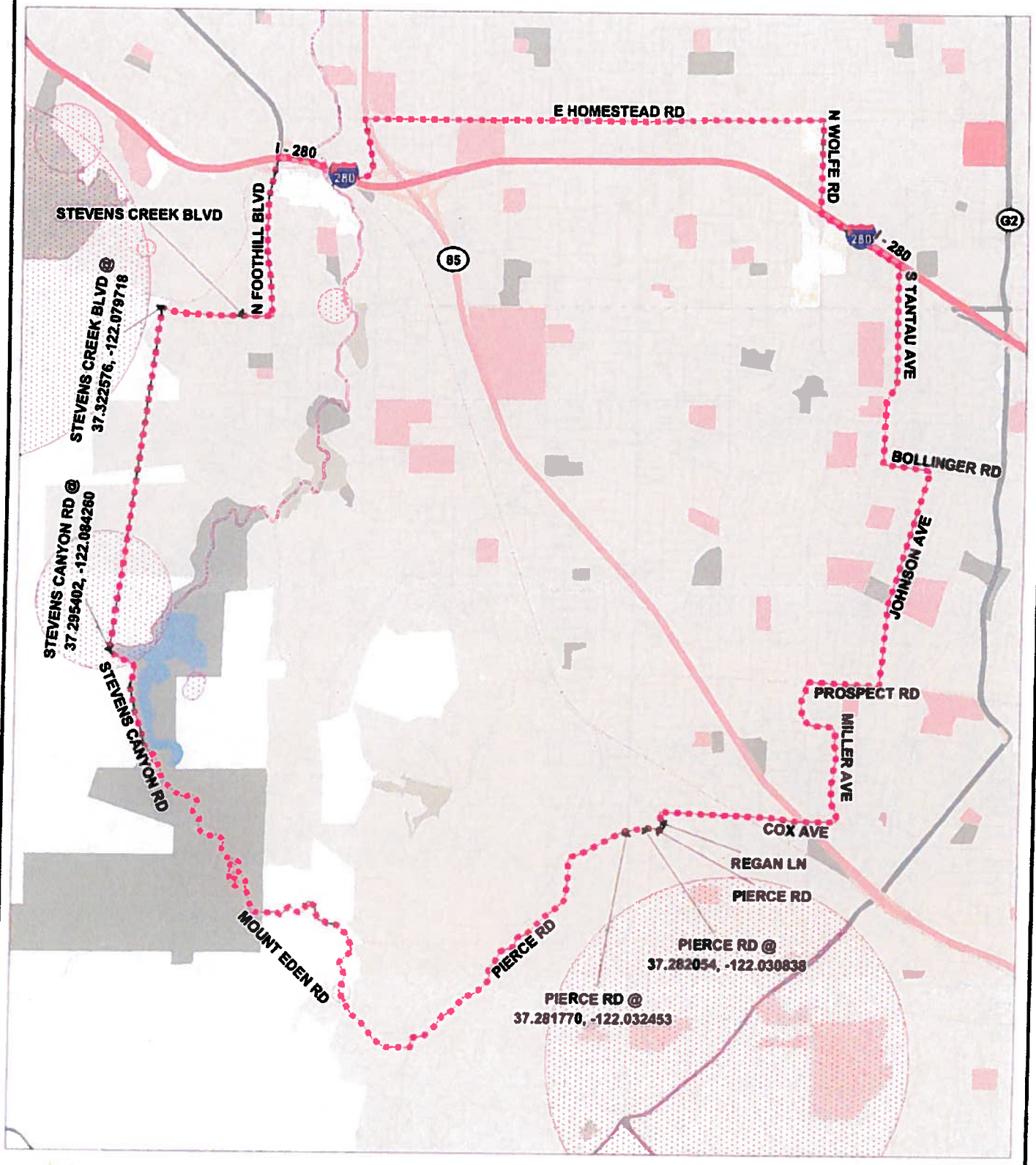
Karen Ross, Secretary Date

# ORIENTAL FRUIT FLY
# CUPERTINO, SANTA CLARA COUNTY
# 2015

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MAXIMUM PROGRAM BOUNDARY

SENSITIVE ENVIRONMENTAL AREA / TREATMENT MITIGATIONS IN PLACE