FINDING OF EMERGENCY

The Secretary of the Department of Food and Agriculture finds that an emergency exists due to the detection of *Bactrocera tau*, in California. On April 5, 2016, one adult *Bactrocera tau* trapped in the Ontario area of San Bernardino County. The detection of this *Bactrocera tau* is indicative of an incipient infestation of *Bactrocera tau* in the Ontario area of San Bernardino, Los Angeles, and Riverside counties. *Bactrocera tau* is a destructive insect pest which attacks the fruit of many plants, including mango, melons, cucumber, guava, bell pepper, and passionfruit. Until now, *Bactrocera tau* has never been detected in California or San Bernardino County. This unexpected occurrence of *Bactrocera tau* meets the national and international trigger for an eradication response in San Bernardino, Los Angeles, and Riverside counties. The puncturing of fruit during egg laying admits decay organisms that cause tissue breakdown. Larval feeding reduces the interior of fruit to a rotten mass. Damaged fruit becomes a rotten mass and is generally unfit for human consumption. Movement of hosts infested with the larvae of the fly can artificially spread the fly to other areas of the county or state. If the fly were allowed to spread and become established in host fruit production areas, California's agricultural industry would suffer losses due to decreased production of marketable fruit, increased pesticide use, and loss of markets if other states or countries enacted quarantines against California products. Therefore, the Department is proposing to adopt Section 3591.27, *Bactrocera tau* Eradication Area to include San Bernardino, Los Angeles, and Riverside counties. If a state agency makes a finding that the adoption (or amendment) of a regulation is necessary to address an emergency, the regulation may be adopted (amended) as an emergency regulation. Government Code Section 11346.1(b)(1).

The affected areas of the counties of San Bernardino, Los Angeles, and Riverside are rural and primarily agricultural production land. The survey, fruit removal and treatment activities authorized under this regulation must begin immediately to ensure that the fly is contained and this infestation does not grow and cause additional significant damage

to the growers in the immediate and adjacent areas. Therefore, the Secretary believes that the five calendar days public comment period should be waived.

Emergency Defined

"Emergency means a situation that calls for immediate action to avoid serious harm to the public peace, health, safety, or general welfare," Government Code Section 11342.545. If a state agency makes a finding that the adoption of a regulation is necessary to address an emergency, the regulation may be adopted as an emergency regulation. Government Code Section 11346.1(b)(1).

In this document the Department is providing the necessary specific facts demonstrating the existence of an emergency and the need for immediate action to prevent serious harm to the general welfare of the citizens of California, pursuant to Government Code Section 11346.1(b)(2).

Government Code Section 11346.1(a)(2) requires that, at least five working days prior to submission of the proposed emergency action to the Office of Administrative Law, the adopting agency provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency.

Government Code Section 11346.1(a)(3) provides that if the emergency situation clearly poses such an immediate, serious harm that delaying action to allow public comment would be inconsistent with public interest, an agency is not required to provide notice pursuant to Government Code Section 11346.1(a)(2) (See Evidence of Emergency).

The Secretary believes that this emergency clearly poses such an immediate, serious harm that delaying action to give the notice pursuant to Government Code Section 11346.1(a)(2) would be inconsistent with the public interest, within the meaning of the Government Code Section 11349.6(b).

The information contained within this finding of emergency also meets the requirements of Government Code Sections 11346.1 and 11346.5.

The Secretary is proposing to implement this regulation pursuant to the authority in Food and Agricultural Code (FAC) Section 407, “the director may adopt such regulations as are reasonably necessary to carry out the provisions of this code which she is directed or authorized to administer or enforce,” and FAC Section 5322, “the director may establish, maintain, and enforce quarantine, eradication, and such other regulations as are in his or her opinion necessary to circumscribe and exterminate or prevent the spread of any pest which is described in FAC Section 5321.”

Additionally, FAC Section 401.5 states, “the Department shall seek to protect the general welfare and economy of the state and seek to maintain the economic well-being of agriculturally dependent rural communities in this state” and Section 403 states, “the department shall prevent the spread of injurious insect pests.”

Evidence of Emergency

Under Section 14.5 of the State of California Emergency Plan, dated July 1, 2009, the Department is responsible for coordinating integrated federal, state and local preparedness for response to, recovery from and mitigation of plant diseases and pests and overseeing the control and eradication of outbreaks of harmful or economically significant plant pests and diseases. The Department is also charged with leading the administration of programs to detect, control and eradicate pests affecting plants.

Bactrocera tau has the capability of causing significant irreparable harm to California’s agricultural industry and some possible adverse environmental impacts. Should the Department not take these actions, *Bactrocera tau* could cause direct catastrophic losses to California’s affected agricultural industries and significant harm to the State’s economy through cost impacts or prohibitions to interstate commerce and exports of host commodities.

If the fly were allowed to spread and become established in host fruit production areas, California's agricultural industry would suffer losses due to increased pesticide use, decreased production of marketable fruit, and loss of markets if the United States Department of Agriculture (USDA) or other states or countries enact quarantines against California products which are hosts for the fly and carry the fly out of the area. Under international trade agreements, the USDA is obligated to notify any trading partner which has concerns regarding the quarantine status of *Bactrocera tau* in the United States. Trade impacts may not be just limited to host commodities produced within the regulated area or even in California. The introduction of exotic fruit flies such as *Bactrocera tau* is always the subject of the regional and specific bilateral trade discussions which occur between the USDA and our trading partners. The expeditious implementation of exotic fruit fly quarantines is a key to ensure qualifying host commodities produced in or packed anywhere in California can also continue to move in international trade. Our trading partners are astute and have used the internet in the past to review our State regulations and compare them to the information they receive from the USDA. Therefore, it is necessary to adopt Section 3591.27 on an emergency basis.

Project Description

This adoption will provide authority for the State to perform specific detection, control and eradication activities against the *Bactrocera tau* in San Bernardino, Los Angeles, and Riverside counties. It will also establish a host list and a new eradication regulation. This authority includes, "The searching for all stages of the fly by visual inspection, the use of traps, or any other means." It is immediately necessary to perform these activities and eradication treatments within San Bernardino, Los Angeles, and Riverside counties. To prevent spread of the fly to noninfested areas to protect California's agricultural industry and urban environment, treatment activities against the fly will begin upon the notification of affected parties. The United States Department of Agriculture's Animal and Plant Health Inspection Service also accepts the standard for the two flies as the

trigger for an eradication response. The Food and Agriculture Organization of the United Nations has a similar international standard established.

The proposed adoption of this eradication regulation will proclaim San Bernardino, Los Angeles, and Riverside counties as an eradication area, establish a host list, and create a new eradication area regulation. The entire counties of San Bernardino, Los Angeles, and Riverside are proposed as an eradication area because it is the political division which provides the most workable eradication area boundary for determining if an infestation exists and exterminating an established *Bactrocera tau* infestation. Fruit may have already been moved from an infested area to another portion of the county. To enable rapid treatment of these small infestations without frequent amendment of the regulation, the entire counties of San Bernardino, Los Angeles, and Riverside should be established as an eradication area. To prevent spread of the fly to noninfested areas and to protect California's agricultural industry, it is necessary to immediately begin treatment activities against *Bactrocera tau*. Therefore, it is necessary to implement this regulation as an emergency action.

Action Plan

Intensive Delimitation Trapping

Intensive trapping is triggered after a single fly is caught. Following confirmation of the specimen, trap densities will be increased over an 81-square mile area centered on the detection. Within the next 24 hours, 50 Jackson and 25 McPhail traps are placed in the square mile core around each find. In the remaining four one-mile deep buffers, Jackson traps are placed at densities of 25, 15, 10, and 5 traps per square mile respectively, going outward. Traps in the core will be checked daily during the first week. Traps in the first buffer zone will be serviced every two days; those in the remainder of the delimitation area are checked at least once during the first week. All traps in the delimitation zone will be checked weekly following a week of negative trap catches. Intensive trapping ends after the third complete life cycle following the last fly find, and then trap densities revert to detection trapping levels. However, if a second fly

is found, additional traps are deployed around the new fly find and trap servicing in the core area will go to a twice weekly schedule and increased emphasis will be placed on servicing traps in the buffer areas in an effort to better delimit the infestation. Traps in the eight-square-miles around the core are serviced every two days, until eradication activities begin, at which time the trap inspection frequency changes to weekly. All traps are then serviced weekly for three life cycles of the fly beyond the last fly detected. Traps may be relocated to available preferred hosts as practical.

The core square mile, surrounding each detection site is 0.5 mile radius with 50 Jackson and 25 McPhail traps. The first buffer is eight square miles surrounding core with 25 Jackson traps per square mile. The second buffer is 16 square miles surrounding first buffer with 15 Jackson traps per square mile. The third buffer is 24 square miles surrounding second buffer with 10 Jackson traps per square mile. The fourth buffer is 32 square miles surrounding third buffer with five Jackson traps per square mile.

Following an eradication program, if no additional flies are trapped, intensive trapping ends after the third complete life cycle, depending on the technique used to achieve eradication, following the last fly find, as determined by a temperature-dependent developmental model run by program personnel in Sacramento.

Larval Survey

Fruit on a property where a fly has been trapped may be inspected for possible larval infestation. Small circular oviposition scars are occasionally visible, indicating an infested fruit. In the absence of visible clues, 100 or more of the fruit on preferred hosts (if available) may be cut open at random and examined for larvae. First and second instar larvae are tiny and may be feeding immediately under the surface of the skin; therefore, fruit cutting should be left to experienced personnel. Fruit on properties adjacent to a trap catch may also be inspected.

If two or more flies are trapped in proximity, fruit cutting may be extended to all properties in a 200-meter radius of the finds, concentrating on preferred hosts. Fruit must be inspected on the property; it cannot be removed from an established quarantine area.

ERADICATION ACTIVITIES

Triggers and General Approach

The CDFA begins an eradication project when it determines that a *Bactrocera tau* infestation exists within the state. Although there is no debate that criteria two or three below criteria indicate the presence of a breeding *Bactrocera tau* population, criteria one below is often open to further review. The CDFA may take up to 10 days, after the criteria are met, to further refine the presence and location of the infestation, in order to better target eradication activities.

1. Two flies within three miles of each other and within a time period equal to one life cycle of the fly;

2. One mated female (known or suspected to have been mated to a wild male); or

3. Larvae or pupae.

Treatment will begin immediately after notification, within 24 to 72 hours after an infestation is determined to exist. Any single male or immature female fly caught within a 15-mile radius of the treatment area may be considered a satellite infestation. The decision on whether to treat will be based on when and where the flies are trapped. A single fly trapped within less than one life cycle of the original find may trigger intensive trapping only. More than one single find, or a fly that is trapped after one or two completed life cycles of the original find, may trigger immediate treatment. The 15-mile radius for satellite infestations then expands to encircle any new treatment area.

Treatment activities may include the following methods:

1. **Male Attractant Technique**

The male attractant technique (MAT) makes use of small amounts of the attractant cuelure mixed with the pesticide naled (Dibrom® Concentrate), soaked into cotton wicks placed inside Jackson traps. Male flies are, lured to the traps, where they are killed by the pesticide when they feed at the wicks. MAT is applied as traps placed in trees, shrubs, or other inanimate objects, placed six to eight feet above the ground and out of the reach of the public. The project boundaries will be nine-square miles around each site where flies were detected. Application is made to a targeted density of 1000 evenly distributed sites in each square mile. Traps are replaced every four weeks for two life cycles (typically four to six months). Life cycle durations are dependent on temperature.

2. **Foliar Sprays**

If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults are detected), 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. Following treatment, completion notices are left with the homeowners detailing precautions to take and post-harvest intervals applicable to any fruit on the property. Treatments are repeated at seven to 14 day intervals for one life cycle of the fly (typically two to three months, dependent on temperature).

3. **Host Fruit Removal**

If evidence that a breeding population exists on a property (i.e., immature stages, mated female, or multiple adults are detected), host removal (fruit stripping) may be used in conjunction with the other treatment options. All host fruit will be removed from all properties within a minimum of a 100-meter radius around the detection sites. The fruit is taken to a landfill for burial using regulatory compliance protocols. Fruit removal will occur once at the beginning of the project, but may be repeated if additional flies are detected.

A temperature-dependent model of the fly's life cycle is used to time the end of treatments. Daily high and low temperatures will be taken from the soil and air in the treatment area using a thermograph (Datapod) housed in a standard weather shelter. Temperature monitoring equipment is to be located at the initial fly find site and each additional wild fly site that represents a significantly different environment or core area. Data will be relayed weekly to the PD/EP Branch in Sacramento.

California Environmental Quality Act

A Statewide Plant Pest Prevention and Management Program Environmental Impact Report (EIR) was prepared by the Department as the lead agency under the California Environmental Quality Act. The EIR addresses the potential impacts and mitigations when implementing the Statewide Plant Pest Prevention and Management Program activities related to *Bactrocera tau*.

The EIR may be accessed at the following website:
http://www.cdfa.ca.gov/plant/peir/.

The Department also relied upon the following documents for determining this proposed emergency rulemaking:

California Pest and Damage Record # 360P06381018

Word Document-“Bactrocera tau Eradication Host List for CDFA”

“Exotic Fruit Fly Strategic Plan,” June 19, 2006, United States Department of Agriculture.

“Action Plan for CUELURE ATTRACTED FRUIT FLIES, Including the Melon Fly, *Bactrocera cucurbitae* (Coquillettl),” Revised April 2000, California Department of Food and Agriculture, Plant Health and Pest Prevention Services (ten pages).

Authority and Reference Citations

Section 3591.15:

Authority: Sections 407 and 5322, Food and Agricultural Code.

Reference: Sections 5761, 5762, 5763 and 5764, Food and Agricultural Code.

Informative Digest

Existing law obligates the CDFA to protect the agricultural industry of California and prevent the spread of injurious pests (Food and Agricultural Code, Sections 401 and 403). Existing law provides that the Secretary may establish, maintain, and enforce eradication regulations as she deems necessary to circumscribe and exterminate or prevent the spread of pests. The eradication regulations may proclaim any portion of the State as an eradication area and set forth the boundaries, the pest, and the means and methods which may be used in the eradication of said pest.

Anticipated Benefits from This Regulatory Action

Existing law, FAC section 403, provides that the department shall prevent the introduction and spread of injurious insect or animal pests, plant diseases, and noxious weeds.

Existing law, FAC section 407, provides that the Secretary may adopt such regulations as are reasonably necessary to carry out the provisions of this code which she is directed or authorized to administer or enforce.

Existing law, FAC section 5321, provides that the Secretary is obligated to investigate the existence of any pest that is not generally distributed within this State and determine the probability of its spread, and the feasibility of its control or eradication.

Existing law, FAC section 5322, provides that the Secretary may establish, maintain, and enforce quarantine, eradication, and such other regulations as are in her opinion necessary to circumscribe and exterminate or prevent the spread of any pest which is described in FAC section 5321.

This amendment provides the necessary regulatory authority to prevent the artificial spread of a serious insect pest which is a mandated statutory goal.

The existing law obligates the Secretary to investigate and determine the feasibility of controlling or eradicating pests of limited distribution but establishes discretion with regard to the establishment and maintenance of regulations to achieve this goal. The adoption of this regulation benefits industries and other host materials (nursery, fruit for domestic use and exports, packing facilities) and the environment (urban landscapes) by having a quarantine to prevent the artificial spread of Malaysian fruit fly over long distances.

This adoption provides the necessary regulatory authority to prevent the artificial spread of a serious insect pest which is a mandated statutory goal.

FAC Section 401.5 states, “the department shall seek to protect the general welfare and economy of the state and seek to maintain the economic well-being of agriculturally dependent rural communities in this state.” The adoption of this regulation is preventing

the artificial spread of *Bactrocera tau* to uninfested areas of the State. The overall California economy benefits by the adoption of this regulation which is intended to prevent Malaysian fruit fly from becoming generally distributed in California.

The California, national and international consumers of California *Bactrocera tau* host materials benefit by having high quality fruit, nuts, vegetables, and seeds available at lower cost. It is assumed that any increases in production costs will ultimately be passed on the consumer.

The adoption of this regulation benefits homeowners who grow fruit, nuts, vegetable, and seeds for consumption and host material which is planted as ornamentals in various rural and urban landscapes by preventing damage to these hosts and the need for them to be treated to mitigate infestations of Malaysian fruit fly.

The Department is the only agency which can implement plant quarantines. As required by Government Code Section 11346.5(a)(3)(D), the Department has conducted an evaluation of this regulation and has determined that it is not inconsistent or incompatible with existing state regulations.

Bactrocera tau Eradication Area.

This will establish San Bernardino, Los Angeles, and Riverside counties as an eradication area for the pest *Bactrocera tau,* add a host list, and create a new eradication area regulation. The effect of the regulation is to provide authority for the State to perform control and eradication activities against *Bactrocera tau* in San Bernardino, Los Angeles, and Riverside counties to prevent spread of the fly to noninfested areas and to protect California's agricultural industry.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that Section 3591.27 does not impose a mandate on local agencies or school districts. All eradication activities shall be conducted by the Department, therefore no reimbursement is required under Section 17561 of the Government Code.

Cost Estimate

The Department has also determined that no savings or increased costs to any state agency, no reimbursable costs or savings under Part 7 (commencing with Section 17500) of Division 4 of the Government Code to local agencies or school districts, no nondiscretionary costs or savings to local agencies or school districts, and no costs or savings in federal funding to the State will result from the proposed action.