FINDING OF EMERGENCY

The Secretary of the Department of Food and Agriculture finds that an emergency exists due to the sudden unexpected detection of *Anastrepha striata* (New World guava fruit fly), in the San Diego area of San Diego County, California. 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 as an emergency regulation. Government Code Section 11346.1(b)(1). “‘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.

On October 5, 2011 (Pest and Damage Record No. 1325251) an adult wild female *Anastrepha striata* was trapped in the San Diego area of San Diego County. This meets the State, federal and international regulatory protocols for determining if an incipient infestation exists in this area of San Diego County.

The Department is proposing the emergency adoption of a regulation to establish San Diego County as an eradication area for *Anastrepha striata*. The intended effect of the adoption of this eradication regulation is to establish authority for the State to perform intensive trapping and searching for any life stage of this exotic fruit fly pest in San Diego County. To prevent spread of the fly to noninfested areas to protect California's agricultural industry and urban environment, if necessary, treatment activities against the fly would have to begin upon the detection of a second life stage of the fly within three miles and within one life cycle. The United States Department of Agriculture's Animal and Plant Health Inspection Service also accepts this standard as the trigger for an eradication response. The Food and Agriculture Organization of the United Nations has a similar international standard established. After the eradication trigger is met, treatments are to begin within 24-72 hours. However, “The searching for all stages of the fly by visual inspection, the use of traps, or any other means” must begin
immediately to determine if there is an incipient infestation in San Diego County. Therefore, it is necessary to adopt Section 3591.25 on an emergency basis.

**Emergency Rulemaking Procedures**

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).

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 the public interest, an agency is not required to provide notice pursuant to Government Code Section 11346.1(a)(2) (See Evidence of Emergency).
After submission of the proposed emergency to the Office of Administrative Law, the Office of Administrative Law shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code section 11349.6.

Further, 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)(92) or allow five calendar days to allow public comment pursuant to Government Code Section 11349.6 would be inconsistent with the public interest, within the meaning of 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.

**California Environmental Quality Act**

“Specific actions necessary to prevent or mitigate an emergency” are exempt from the California Environmental Quality Act [CEQA]. Public Resources Code Section 21080(b)(4). “Emergency means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.” Public Resources Code Section 21060.3.

**Statutory Exemption**

Title 14, California Code of Regulations Section 15269, subdivision (c) “Specific actions necessary to prevent or mitigate an emergency.”

**Categorical Exemption**

Title 14, California Code of Regulations, Section 15308. “Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the
maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment."

For the reasons set forth in this document, this constitutes a specific act necessary to prevent or mitigate an emergency and is also an action required for the preservation of the environment.

Evidence of Emergency
The *Anastrepha striata* has the capability of causing significant harm to California’s agricultural industry and some possible adverse urban impacts. The New World guava fruit fly is a major pest of guava. It has also been recorded infesting a number of cultivated and wild fruit including avocado, cherimoya, mango, peach, sweet orange and other citrus. California is the number one economic citrus state in the nation, with the USDA putting the value of California citrus at $1,131,851,000 (Federal Register Vol. 71 No.83; published May 1, 2006; pg 25487). A 2002 report by the Arizona State University School of Business indicates that there is at least $825.6 million of direct economic output and another $1.6 billion when all upstream suppliers and downstream retailers are included. This represents over 25,000 direct and indirect employees. The 2009 crop value for California-produced peaches was over $326 million. San Diego County is the avocado capital of the U.S., producing 60 percent of all the avocados grown in California. Although avocados are a known host, we do not consider commercial grade, mature green ‘Hass’ avocado as a host and this is the principal variety grown in California. The economic impact on the other varieties is unknown.

*Anastrepha striata* can spread both naturally and artificially through the human assisted movement of infested commodities. It is critical to immediately determine if an incipient infestation is present to ensure if treatments are performed, they are done so in the smallest area possible and a quarantine can be implemented to prevent the rapid artificial spread over long distances.
The United States Department of Agriculture is obligated to provide our trading partners notification, within 96 hours, of the status of any exotic fruit fly detection made and which is of concern to them. This provides the trading partners with the opportunity to protect themselves through the implementation of quarantine requirements if they believe the situation is not being properly handled as required by international trade agreements. Additionally, although we do not consider commercial ‘Hass’ avocados as a host, our trading partners may not recognize this. California exports significant amounts of avocados, citrus and peaches and the implementation of quarantine restrictions on all of California would be costly to our industry.

The Secretary finds that the immediate adoption of this regulation to establish a new eradication area is necessary to prevent or mitigate the emergency, to avoid serious harm to the general welfare and economy of the State, demanding immediate action to prevent the spread of an injurious insect and to maintain the economic well-being of agriculturally dependent rural communities.

Project Description
The adoption of this regulation will provide authority for the State to perform specific detection, delimitation, control and eradication activities against the *Anastrepha striata* in San Diego County. 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 within the San Diego area of San Diego County. To prevent spread of the fly to noninfested areas to protect California’s agricultural industry and urban environment, if necessary, treatment activities against the fly would have to begin upon the detection of a second life stage of the fly within three miles and within one life cycle.

The proposed adoption of this eradication regulation will proclaim San Diego County as an eradication area. The entire County of San Diego is 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 *Anastrepha striata* fruit fly 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 county should be established as an eradication area.

The Department does not have a specific action plan for *Anastrepha striata*. However, the Department’s Primary Entomologist has recommended that the Caribbean Fruit Fly Action Plan be utilized to the degree feasible as follows:

**DELIMITATION PROCEDURES**

A. Detection and Intensive Delimitation Trapping

The Department maintains a cooperative state/county trapping program for New World guava fruit fly to provide early detection of any infestation in the State. The detection program uses the McPhail trap, an invaginated glass flask baited with yeast or Nu-lure in water that is attractive to male and female flies. Traps are hung in host trees at specified densities in susceptible areas of California. County or state employees inspect these traps weekly or bi-weekly throughout the year in Southern California. Detailed information about the traps, trap placement, and servicing can be found in the Department’s “Insect Trapping Guide.”.

Intensive delimitation trapping is triggered when a single fly is trapped. Following the confirmation of the specimen, trap densities in the core square mile are increased within 24 hours. Trap densities in the remainder of the delimitation area will be increased from the core outward
within 72 hours of the find. Optimally, delimitation traps are placed over
an 81-square-mile area in an 80-40-20-10-5 array. Traps in the core mile
are serviced daily for the first week. If no additional flies are found, the
trap inspection frequency changes to weekly and intensive trapping
continues for two life cycles 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 existing detection trapping grid shall be used in the delimitation phase
of the program by increasing existing trap levels to approximate the
optimal delimitation grid. Under no circumstances shall multiple trapping
grid systems be utilized.

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 staff in Sacramento.
B. 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

A. Triggers and General Approach

The CDFA begins an eradication project when it determines that a New World guava fruit fly infestation exists within the state. Although there is no debate that the last two criteria indicate the presence of a breeding New World guava fruit fly population, the first criterion 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.

Bait sprays are used to stop reproduction of the wild flies by killing adults before they can mate and lay eggs. Consult current label(s) for conditions or restrictions to pesticide treatments. Treatments using bait sprays will continue generally for at least two life cycles of the fly past the last fly 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 program staff in Sacramento.

B. **Notification**

The purpose of notification is to comply with state law and present accurate information in an understandable and non-threatening format to concerned groups. Local and state elected representatives of the residents in the treatment area will be notified and apprised on major developments before and during treatment. During ground treatment activities, any resident whose property will be treated with foliar sprays, following the discovery of infested fruit on or near their property, will be notified in writing prior to treatment. Treatment notices include the name of the pest to be eradicated, the material to be used, and a phone number to call in case of additional questions on project operations. Following treatment, a completion notice is left detailing any precautions the homeowner should take, including harvest intervals on treated fruit. Treatment without prior notification may be necessary on a small number of properties if active larvae are detected. However, reasonable efforts will be made to contact the homeowner.

C. **Treatment**

**Ground Bait Spray**

The foliage of all shrubs and trees within a 200-meter radius of each infested property will be treated within 24 hours with insecticide/bait sprays using hydraulic spray equipment. Residents and tenants on affected properties will be notified in writing at least 24 hours prior to
treatment. Completion notices are left following treatment detailing precautions to take and harvest intervals applicable to any fruit on the property. Treatments are repeated at five to 14 day intervals, unless significant rainfall justifies re-treatment. Consult current label(s) for conditions or restrictions to pesticide treatments.

Fruit Stripping

Fruit will be stripped from all host trees on a known infested property and adjacent properties up to 100 meters away. Fruit is placed in heavyweight plastic bags and removed to a landfill site to be buried under at least one foot of fill.

D. Pesticide Monitoring

A pesticide monitoring program may be used to evaluate program effectiveness and environmental impact. Pesticide monitoring is conducted under contract.

Monitoring for detectable levels of pesticides in and around treatment areas may include sampling of air, foliage, food, crops, water, soil or other media. The evaluation must effectively address agency, cooperator, and public concerns.

E. Post-Treatment Monitoring

The success of the eradication program is monitored at intensive trapping levels. If pesticide sprays are used, intensive trapping levels are maintained during treatment. Traps are serviced every week for one life
cycle of the fly after the last treatment. If no flies are caught during that
time, trap densities return to pre-treatment detection levels. A fly find in
the area will trigger resumption of treatment.

PUBLIC INFORMATION

Any resident whose property will be treated following the determination of a breeding
population (egg, larvae or mated female) on or near their property are notified at least
24 hours in advance of any treatment. A breeding population may necessitate an
immediate eradication response due to the potential for natural dispersal and infested
fruit to be artificially moved out of the area. After treatment, completion notices are left
with the residents detailing precautions to take and post-harvest intervals applicable to
any host fruit treated.

Public information concerning the New World guava fruit fly project will consist of press
releases to the general public and direct notification of project developments to
concerned local and state political representatives and authorities. Press releases are
prepared by the CDFA’s 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.

BACKGROUND

Common Name: New World Guava Fruit Fly *

[* NOTE: This species is known in the literature as the guava
fruit fly, but this common name is also used for the Asian species
Bactrocera correcta, which is more commonly captured in California
than A. striata. To avoid confusion between the two when using the
common name, New World guava fruit fly is used in this profile for A. striata.]

Scientific Name: *Anastrepha striata* Schiner

Order and Family: Diptera: Tephritidae

Lure: Protein bait

Distribution: The New World guava fruit fly is widespread throughout Central and South America, being recorded from Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Guyana, Honduras, Mexico, Panama, Peru, Suriname, Trinidad, and Venezuela. Adults have been trapped in California five times between 1963 and 1998.

Description: The New World guava fruit fly has a yellow tan body with a large black U-shaped mark on the top of the thorax, and clear wings with a typical brown *Anastrepha*-type wing pattern with an “S” across the wing (Figure 1). The female ovipositor is about as long as the abdomen.
Figure 1. *Anastrepha striata* female (photo by Dr. Jason Leathers, CDFA)

**Life Cycle:** A CDFA life cycle model is not available for this species. Instead, the model for Mexican fruit fly (*Anastrepha ludens*) should be used.

**Hosts and Economic Importance:** The New World guava fruit fly is a major pest of guava. It has also been recorded infesting a number of cultivated and wild fruit including avocado, cherimoya, mango, peach, and sweet orange. In California, the combined 2008 gross value of the above hosts was over $1.9 billion.

**Information Relied Upon**

Pest and Damage Record No. 1325251.

Email dated October 6, 2011, from Kevin Hoffman to Stephen Brown and its attachments.

**Authority and Reference Citations**

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

Reference: Sections 407 and 5322, 5761, 5762 and 5763, Food and Agricultural Code.

**Informative Digest**

Existing law 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 (FAC, Section 5321).

Existing law also provides that the Secretary may establish, maintain and enforce quarantine, eradication and other such regulations as he deems necessary to protect the agricultural industry from the introduction and spread of pests (FAC, Sections 401, 401.5 403, 407 and 5322).
Section 3591.25. *Anastrepha striata* Eradication Area

The adoption of this regulation will establish San Diego County as the eradication area, the hosts and the means and methods that may be utilized for eradication. The affect of the adoption of this regulation will be to implement the State’s authority to perform eradication activities against *Anastrepha striata* in the San Diego area of San Diego County.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that Section 3591.25 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 the regulations will involve no additional costs or savings to any state agency because initial funds for state costs are already appropriated, no nondiscretionary costs or savings to local agencies or school districts, no reimbursable savings to local agencies or costs or savings to school districts under Section 17561 of the Government Code and no costs or savings in federal funding to the State.