

FINDING OF EMERGENCY

The Secretary of the Department of Food and Agriculture finds that an emergency exists, and that the foregoing adoption of a regulation is necessary for an immediate action to avoid serious harm to the public peace, health, safety or general welfare, within the meaning of Government Code Section 11342.545 and Public Resources Code Section 21080. The Department does not have a record of any person requesting a notice of regulatory actions under Government Code Section 11346.4(a)(1). Therefore, the provisions of Government Code Section 11346.1(a)(2) do not appear to be applicable to this emergency action as no one has requested such notice. 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 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).

Description of Specific Facts Which Constitute the Emergency

The light brown apple moth (*Epiphyas postvittana*) was first detected in California on February 27, 2007 in Alameda County and on March 7, 2007, the light brown apple moth (LBAM) was first detected in Contra Costa County. Through the deployment of delimiting detection traps, numerous additional adult male moths were trapped in both counties. As a result, the Department adopted an emergency regulation, Section 3591.20, which became effective on March 21, 2007. The Department continued to deploy detection traps in additional counties. As a result of multiple detections of LBAM, the Department amended Section 3591.20 to add the counties of Marin and San Francisco (effective April 3, 2007); Santa Clara County (effective April 20, 2007); Monterey, San Mateo and Santa Cruz counties (effective April 23, 2007); and, Napa County (effective June 5, 2007). The Department also proposed the emergency adoption of Section 3434, Light Brown Apple Moth Interior Quarantine (effective April 20, 2007). Emergency amendments to Section 3434 were subsequently made adding portions of Alameda, Contra Costa, Marin,

Monterey, San Benito, San Mateo and Santa Cruz counties (effective June 6, 2007) and Napa County (effective June 7, 2007).

On May 2, 2007, the United States Department of Agriculture (USDA) issued a federal order regulating the interstate movement of host material from the infested areas of California and all of Hawaii. On June 21, 2007, emergency amendments were effective adding portions of Alameda, Monterey and Santa Cruz counties; and, including all harvested fruits and vegetables as regulated commodities. On July 18, 2007, emergency amendments were effective adding portions of Alameda, Contra Costa, Los Angeles, Marin, Monterey, San Francisco, San Mateo, Santa Clara, Santa Cruz and Solano counties. On August 21, 2007, emergency amendments were effective adding additional portions of the counties of Alameda, Monterey, San Francisco, San Mateo, Santa Clara, Santa Cruz and Solano. On September 28, 2007, emergency amendments were made, primarily to merge some of the regulated areas of Alameda, Contra Costa, Marin, San Francisco, San Mateo and Santa Clara counties into one regulated area. On November 8, 2007, an emergency amendment became effective that which increased the regulated areas of Half Moon Bay and Pescadero, San Mateo County; and, the jointly regulated areas of Monterey and Santa Clara counties. Emergency amendments were made adding (San Mateo and Santa Clara counties) and removing areas (Los Angeles, Marin, Monterey, Napa and Santa Clara counties - effective November 29, 2007); removing an area (Oakley, Contra Costa County - effective December 3, 2007); and , on December 21, 2007, several expansions became effective for areas in Contra Costa, San Mateo and Santa Clara counties. Subsequent emergency amendments were made expanding or removing existing regulated areas which were effective on February 4, February 8, March 12, March 17, March 21, and April 8, 2008. A new county was added effective March 21, 2008, the Carpinteria area of Santa Barbara County.

In late October 2007, the USDA established a new regulatory protocol which was distributed to county agricultural commissioners as "Phytosanitary Advisory No. 31-2007. This regulatory protocol was adopted based upon the recommendations of the LBAM Technical Working Group (TWG). The purpose of the protocol is to determine when it is

appropriate to initiate or remove interstate regulatory restrictions pertaining to LBAM in response to new detections or the elimination of incipient LBAM populations. A key component of this regulatory protocol is the revision of the triggers for initiating a regulated area. Under the recommendations of the TWG, a single detection (trapping) of a male LBAM more than three miles from another male LBAM, no longer warrants a quarantine response. This is contingent upon the deployment of LBAM traps at the appropriate delimitation levels in buffer areas surrounding the single detection. Prior to this regulatory protocol, the detection of a single LBAM was the agreed upon trigger for initiating a quarantine area. The Department reviewed and concurs with this new protocol and is applying the same criteria contained in it to initiate or remove LBAM regulatory restrictions pertaining to the intrastate movement of regulated articles and commodities.

The Department uses Geographic Information Systems (GIS) mapping programs to plot the locations of all the detections of LBAM. As a result, based upon the criteria contained in the USDA regulatory protocol, the Department determined that the current regulated area of Santa Clara County needs to be expanded. There have been numerous detections of LBAM in various areas of Santa Clara County. On February 11, 2008 (California Department of Food and Agriculture Pest and Damage Record (PDR) #1549824), a single male LBAM was caught in a delimitation trap in the San Jose area of Santa Clara County. On April 2 and 4, 2008 (PDR #'s 15223807 and 1548251), two additional adult male LBAM were caught in traps at separate residences in the San Jose area of Santa Clara County. On March 3 and 21, 2008 (PDR #'s 1550001 and 1548597), two additional adult male LBAM were caught in traps at additional residences in the San Jose area of Santa Clara County. Each of these groups of LBAM were trapped within three miles of each other and within one life cycle. This meets the regulatory protocol for establishing a new regulated area in the San Jose area of Santa Clara County.

Additionally, numerous single catches of LBAM were made: April 16, 2007 (PDR # 1374886) - Cupertino area; June 12, 2007 (PDR # 1378942) – Santa Clara area; June 14, 2007 (PDR # 1374896) - San Jose area; October 23, 2007 (PDR # 1532091) – Santa Clara area; January 30, 2008 (PDR # 1549063) – San Jose area; March 5, 2008

(PDR # 1548001) – Sunnyvale area; and, on March 13, 2008 (PDR # 1548428) – Cupertino area. Each of these finds would require delimitation trapping at 100 traps in the core square mile surrounding the detection and 25 traps in each square mile surrounding the core area. Additionally, under the USDA regulatory protocol, during the delimitation trapping, no treatments may be applied within the affected area. If another LBAM is subsequently detected within three miles of one of these detections and within one life cycle, it will automatically trigger an additional quarantine area. If another LBAM is subsequently detected within the second generation and within three miles of any one of these detections, it will trigger another two generations of delimitation trapping in the affected area. Due to the pattern of the numerous single detections, the Department has determined that the affected areas surrounding these detections need to be treated. Therefore, under the USDA regulatory protocol, these affected areas must also be included in the regulated area.

The LBAM has the capability of causing significant irreparable harm to California's agricultural industry and some possible adverse environmental impacts. While the Department's compliance with the California Administrative Procedure Act and the California Environmental Quality Act (CEQA) are separate actions, they can be interrelated. Although adoption of specific regulatory authority can be the beginning of a project and therefore covered by CEQA, this regulation, for the reasons already set forth, constitutes a specific act necessary to prevent or mitigate an emergency as authorized by Public Resources Code Section 21080, subdivision (b) (4) and Title 14, California Code of Regulations Section 15269, subdivision (c). The regulation is also an action required for the preservation of the environment and natural resources as authorized by Title 14, California Code of Regulations, sections 15307 and 15308.

LBAM is a highly polyphagous pest that attacks a wide number of fruits and other plants. Hosts occurring in California that are of significant agricultural or environmental concern include, but are not limited to: alder, alfalfa, apple, apricot, avocado, blueberry, blackberry, broccoli, cabbage, camellia, cauliflower, ceanothus, chrysanthemum, citrus, clematis, clover, columbine, cottonwood, currant, cypress, dahlia, ferns, fir, geranium, grape,

hawthorn, honeysuckle, kiwi, lupine, madrone, mint, oak, peach, pear, peppers, persimmon, poplar, potato, raspberry, rhododendron, rose, sage, spruce, strawberry, walnut and willow. It is an insect species that feeds upon over 250 species of native and ornamental plants. The general area of infestation contains numerous sensitive plant species and habitats. There is an imminent threat for adverse consequences and ultimate extinction to some of these sensitive species if LBAM becomes permanently established in California.

Currently, this species has a relatively restricted geographic distribution, being found only in portions of Europe and Oceania. The pest is native to Australia but has successfully invaded other countries. The likelihood and consequences of establishment by LBAM have been evaluated in pathway initiated risk assessments. LBAM was considered highly likely of becoming established in the United States and the consequences of its establishment for United States agricultural and natural ecosystems were judged to be severe. The United States Department of Agriculture, Animal Plant and Health Inspection Service (USDA, APHIS) estimated that approximately 80 percent of the continental United States may be climatically suitable for LBAM.

In its native habitat of Australia, LBAM generally completes three generations annually. More than three generations can be completed if temperatures and host plants are favorable. In southeastern Australia where it is warmer, four generations can be completed. In contrast, two generations occur in Tasmania, New Zealand and in Great Britain. In Australia, generations do not overlap, but they do in Great Britain. As the population builds, LBAM is more abundant during the second generation. Therefore, the second generation causes the most economic damage as larvae move from foliage to fruit. The size of the third generation is typically smaller than the previous two due to leaf fall (including attached larvae) as temperatures decline in autumn. LBAM does not diapause and its continued development is slowed under cold winter temperatures. In cold climates, the pest overwinters as larvae. Because LBAM causes damage in a wide range of climate types in Australia, pest status is not dictated by climate.

LBAM causes economic damage from feeding by caterpillars, which may:

- destroy, stunt or deform young seedlings;
- spoil the appearance of ornamental and native plants; and
- injure deciduous fruit-tree crops, citrus and grapes.

Based upon losses in Australia, annual losses in California are expected to be much higher as the agricultural sector is larger and more variable. Additionally, LBAM, if not eradicated, will cause economic damage to California's export markets due to the implementation of quarantines by foreign and state governments.

Where it occurs, LBAM is difficult to control with sprays because of its leaf-rolling ability, and because there is evidence of resistance due to overuse of the same insecticides. Conifers are damaged by needle-tying and chewing. Larvae have been found feeding near apices of Bishop Pine seedlings where they spin needles down against the stem and bore into the main stem from the terminal bud. LBAM constructs typical leaf rolls (nests) by webbing together leaves, a bud and one or more leaves, leaves to a fruit, or by folding and webbing individual mature leaves. During the fruiting season, they also make nests among clusters of fruits, such as grapes, damaging the surface and sometimes tunneling into the fruits. During severe outbreaks, damage to fruit may be as high as 85 percent.

Egg masses are most likely to be found on leaves. The larvae are most likely to be found near the calyx or in the endocarp; larvae may also create "irregular brown areas, round pits, or scars" on the surface of a fruit. Larvae may also be found inside furled leaves, and adults may occasionally be found on the lower leaf surface.

LBAM is an actionable pest for the USDA, APHIS and requires the Australian Quarantine and Inspection Service to take corrective actions to prevent this pest from being associated with apple, citrus, pear fruits and other host commodities being exported to the United States. Host fruit exported from New Zealand faces similar restrictions by USDA, APHIS and the New Zealand Ministry of Forestry and Fisheries is responsible for any corrective actions at origin. Any host commodity arriving in the United States that is infested with or contaminated by LBAM is issued a Federal Emergency Action Notice and must be either

destroyed, reexported or undergo an appropriate quarantine treatment prior to its release into the United States commerce. Canada and Japan also treat LBAM as a quarantine action pest. The People's Republic of China requires all host fruit imported to originate from orchards that are free from LBAM.

Wherever LBAM occurs in association with vineyards, it is considered to be a very important agricultural pest. Unless properly managed, LBAM causes substantial risk to crop yield and quality by causing both direct and indirect damage. Emerging larvae in the spring may feed upon both the flowers and newly set fruitlets causing a direct loss in yield. Later in the year, LBAM larvae feeding on maturing fruit can cause indirect loss by introducing botrytis infections into the grape bunches. As an example, in 1992 in Australia, 70,000 larvae per hectare were documented and caused a loss of 4.7 tons of Chardonnay fruit. Damage in the 1992-93 Chardonnay season at Coonawarra, southern Australia, cost \$2,000 per hectare.

In South Australia, LBAM is also a significant pest of apricots and can attack other stone fruit. Peaches are also damaged by feeding that occurs on the shoots and fruit.

The first generation (in spring) causes the most damage to apples while the second generation damages fruit harvested later in the season. Some varieties of apples such as 'Sturmer Pippin' (an early variety), 'Granny Smith' and 'Fuji' (late varieties) can have up to 20 percent damage while severe attacks can damage up to 75 percent of a crop.

In Australia, when insecticides are not applied, typically between 5 percent to 20 percent of fruit is damaged, but this can exceed 30 percent. In New Zealand, damage to unsprayed crops commonly reaches 50 percent (Wearing et al., 1991). More information regarding potential economic impact in California may be found in the environmental assessment prepared by USDA at www.aphis.usda.gov/plant_health/ea/downloads/lbam_ea_sc.pdf. In 10 of California's affected counties, it is estimated that LBAM could cause \$160 to \$640 million in losses. These estimates were derived from the agricultural impacts in Australia and New Zealand. This estimate does not include economic costs to the nursery industry

nor to other significant host crops in California such as apricots, avocados, kiwifruit, peaches, etc., grown in other counties.

Exact economic impacts on international and domestic exports are uncertain at this time. California is the nation's leader in agricultural exports and in 2003 shipped more than \$7.2 billion in both food and agricultural commodities around the world. Some countries have specific regulations against this pest, and many others consider it a regulated pest that would not be knowingly allowed to enter. Additional measures, such as preharvest treatments and postharvest disinfestation, would likely have to be taken to ensure that shipments to these countries are free from LBAM. In addition, LBAM is an exotic pest, i.e., it is not established in the continental United States, and therefore other states within the United States would likely impose restrictions on the movement of potentially infested fruits, vegetables and nursery stock. These restrictions could severely impact the domestic marketing of California agricultural products.

The majority of California does have a climate which would favor the LBAM. Additionally, LBAM may have seven or more generations under some California climatic conditions. If unchecked, this would enable LBAM to build higher population levels in California. Given the known economic damages occurring in LBAM's present range, its potential damage to California's environment and agricultural industry could be devastating, especially without adequate control measures.

As a result of this proposed change, the total proposed regulated area would increase by approximately 99 square miles for a total of approximately 1,336 square miles. The effect of this proposed change to the regulation will be to establish authority for the State to perform quarantine activities against LBAM (*Epiphyas postvittana*) in these additional areas.

Unless the State's LBAM regulation is substantially the same as the LBAM federal regulation and orders, the USDA cannot regulate less than the entire State. As an example, on January 11, 2008, the USDA issued a Federal Order that expanded its citrus

greening (CG) quarantine to encompass the entire State of Florida. This action was a result of the USDA confirming detections of CG in two new Florida counties: Lake and Hernando. Following discussions with the State of Florida, the USDA determined that parallel quarantine actions proposed by the State of Florida were not adequate and, therefore, it was necessary to impose statewide restrictions on the movement of all live host plants and host plant parts from Florida.

Therefore, this emergency amendment to Section 3434 is also necessary to ensure the State's regulation continues to be substantially the same as the federal order issued November 20, 2007, which includes the October 2007 regulatory protocol.

To prevent the spread of the LBAM to non-infested areas in order to protect California's agricultural industry and environment, it is necessary to begin quarantine activities against the LBAM immediately. Therefore, it is necessary to amend this regulation as an emergency action.

Authority and Reference Citations:

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

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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 (Food and Agricultural Code, Sections 401, 403, 407 and 5322).

Section 3434. Light Brown Apple Moth Interior Quarantine.

The proposed amendment of Section 3434(b) will expand the contiguous regulated area of San Mateo and Santa Clara counties in the San Jose area of Santa Clara County by adding approximately 99 square miles. The effect of this amendment of the regulation is to establish authority for the State to perform quarantine activities against LBAM in these additional areas.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that Section 3434 does not impose a mandate on local agencies or school districts, except that an agricultural commissioner of a county under quarantine has a duty to enforce it. No reimbursement is required under Section 17561 of the Government Code because the affected county agricultural commissioner requested that these changes to the regulation be made.

Cost Estimate

The Department has also determined that the regulation 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.