

DEPARTMENT OF FOOD AND AGRICULTURE
PROPOSED CHANGES IN THE REGULATIONS

Title 3, California Code of Regulations

Section 3591.20, Subsection (a)

Light Brown Apple Moth Eradication Area

INITIAL STATEMENT OF REASONS/

POLICY STATEMENT OVERVIEW

Description of Public Problem, Administration Requirement, or Other Condition or Circumstance the Regulation is Intended to Address

This regulation is intended to address the obligation of the Department of Food and Agriculture to protect the agricultural industry from the movement and spread of injurious plant pests within California.

Specific Purpose and Factual Basis

The specific purpose of Section 3591.20 is to provide authority to the State to eradicate or control infestations of light brown apple moth (LBAM), *Epiphyas postvittana*, from within the declared eradication areas by the established means and methods.

The factual basis for the determination by the Department that the amendment of this regulation is necessary is as follows:

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); Napa County (effective June 5, 2007); Los Angeles and Solano counties (effective July 13, 2007); Santa Barbara County (effective February 2, 2008); and, Sonoma County (effective March 3, 2008). The Department also adopted Section 3434, Light Brown Apple Moth

Interior Quarantine (effective April 20, 2007) and has continued to amend this regulation as appropriate, based upon the United States Department of Agriculture's regulatory protocol.

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.

On April 17, 2008, an adult male LBAM was caught in a delimitation trap in the Aromas area of San Benito County. The regulatory authority under Section 3591.20 includes, "The searching for all stages of light brown apple moth by visual inspection, the use of traps, or any other means anywhere within the said area." Therefore, this emergency amendment to Section 3591.20 was necessary to ensure the Department has the best chance to conduct a successful eradication project in the smallest possible area of San Benito County. Additionally, the Department is still conducting a regional delimitation surveys for LBAM. This activity is also specifically authorized under Section 3591.20.

An emergency eradication response is necessary now to ensure the LBAM does not continue to multiply and spread to other uninfested areas of the State. The adult LBAMs may continue to emerge and are not known to be a long distance flyer. These types of moths generally only fly up to 100 meters to find suitable host material during

release studies. The real threat of long distance spread is through the human assisted movement of infested plants and plant parts, including greenwaste, and other possible carriers such as equipment or appliances contaminated with host material.

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, blackberry, blueberry, 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. 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.

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. The USDA, APHIS, is also contemplating the need for a federal domestic quarantine restricting the interstate movement of possible hosts and carriers.

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, 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, rounds 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. Canada and Mexico have already implemented quarantine restrictions that are more stringent than the interstate restrictions imposed by the USDA.

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 if the USDA removed its restrictions. Currently, 14 states have requested pre-shipment notification for LBAM regulated articles. 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. Given the known economic damages occurring in LBAMs present range, its potential damage to California's environment and agricultural industry could be significant; especially without adequate control measures.

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.

On February 14, 2008, the Department sent a “Notice of Preparation (NOP) of a Draft Programmatic Environmental Impact Report for the Light Brown apple Moth Eradication Program” to the State Clearinghouse, Responsible, Trustee, and Interested Agencies; and other Interested Organizations and Individuals concerning public scoping meetings.

The Department and the USDA have always evaluated the potential impacts of any eradication activity on the public health, domestic and wild animals and the general environment. The Department formed a Light Brown Apple Moth Environmental Advisory Task Force (LBAM EATF). The members include representatives from Alliance for Food and Farming, California Department of Public Health, California Certified Organic Growers, Sierra Club, Ventana Chapter, Pesticide Action Network of North America, The Nature Conservancy, California Department of Fish and Game, Santa Cruz Group; California Department of Pesticide Regulation, The Otter Project, Forest Health Protection, U.S. Environmental Protection Agency (EPA) Region 9, California Department of Forestry and Fire Protection, California Office of Environmental Health Hazard Assessment, Citrus Research Board, Swanton Berry Farms, California Association of Nurseries and Garden, Horticulture and Crop Science Department, Cal Poly San Luis Obispo; California State University Monterey Bay, California Association of Winegrape, Earthbound Farms, Molino Creek Farm, University California at Davis, Santa Clara County Agricultural Commissioner’s office, California Association of Winegrape Growers, Western Growers Association, California Farm Bureau Federation and Environmental Studies Institute, Santa Clara University.

The mission of the LBAM EATF is to communicate environmental concerns and research needs to the Secretary of the Department, help in scoping of the program’s Environmental Impact Report, serve as liaison with key environmental groups about the program and provide public outreach to the affected communities. The LBAM EATF has met to discuss, evaluate and make recommendations on a wide range of issues: research needs, sticky trap proposal, bio control, acute toxicity tests, public risk communication, post-release monitoring, mapping and trap data, third party review and risk assessment, spray patterns-wind tunnel tests, spray patterns-modeling, CEQA and the Department’s Environmental Impact Report and pesticide alternatives.

This regulation does not mandate the use of any specific pesticide. However, the Department and the USDA may continue to use a formulation of an LBAM insect pheromone. The LBAM EATF recommended that independent acute and environmental toxicity tests be performed. Any pheromone formulation which is used will undergo these tests according to Good Laboratory Practice (the highest research standard) protocols. This standard requires that the laboratory be registered and inspected regularly by the EPA and/or other agencies. Quality assurance personnel inspect "critical" phases during testing, including research logs and reports. The Quality Assurance Officers are certified and are independent of any laboratory performing the testing. The following tests will be performed: Acute Oral Toxicity, Acute Dermal (skin), Toxicity, Acute Inhalation Toxicity, Skin Sensitization, Acute Eye Irritation and Acute Dermal Irritation. These are the standard registration tests required by the U.S. EPA and the California Department of Pesticide Regulation.

The Department will also conduct fresh water aquatic toxicity tests with the Department of Fish and Game's Pesticide Investigation Unit. These tests will use the following organisms: waterflea, algae, fathead minnow, rainbow trout and bullfrogs. The marine test will be for larval mussels survival and development.

The Department continues to explore alternative eradication strategies as tools. In May 2008 the TWG evaluated a mass trapping plan for LBAM. This was proposed as an alternative control tactic by an organization called "Helping Our Peninsula's Environment." The TWG concluded that it could not recommend the plan as the basic premises were not consistent with the ways in which insect traps function in the field or mass-trapping functions as an insect control technique.

The eradication of LBAM will likely take several years. The eradication of LBAM will require an integrated systems approach using multiple tools, including applications of pheromone for mating disruption, use of insecticide treatments, male moth attractant treatment technology, implementation of biological control and releases of sterile insects (when available). Decisions regarding eradication activities will be based on the geographic size and population densities, such as: definite outlier infestations, small

and isolated infestations and finally the heaviest populations. Buffer areas will be used, as appropriate, to protect any threatened or endangered species or other environmentally sensitive areas.

Ground treatments may be used for small and isolated infested areas which are approximately five miles from another infested area. Ground treatments may use Bt and/or an insect pheromone. In one type of ground treatment, LBAM pheromone twist ties are placed for mating disruption. A synthetic formulation of the sex pheromone of the LBAM is infused into twist ties. This pheromone confuses the male LBAM, impairing its ability to find a mate. If the LBAM cannot find each to mate, the population will die out. There have been no reported and scientifically proven adverse health effects on people or pets from these twist ties. Additionally, because the pheromone targets LBAM, it will not affect humans, other beneficial insects, animals, plants or vegetable gardens. The twist ties are placed at the rate of 250 twist ties per acre in a 200 meter radius around each infested site. The twist ties remain in place for two temperature driven LBAM life cycles and are replaced every three to six months as needed to maintain the pheromone at disruption levels. During this time, the delimitation LBAM trap density is 100 traps in the core square mile surrounding the infestation and 25 traps per square mile in the surrounding eight square miles. After two life cycles without any LBAM being trapped, the twist ties are removed. The delimitation traps remain in place for one additional life cycle. If no additional LBAM are detected, this area will be declared free from LBAM. The life cycles are determined by using temperature readings for the area and inputting the data into a predictive computer software program.

The program has already successfully eradicated LBAM in five areas using ground treatments. This includes the Oakley area of Contra Costa County and the Napa area of Napa County using twist ties and three applications of *Bacillus thuringiensis kurstaki* (Bt). The Danville area of Contra Costa County, San Jose area of Santa Clara County and the Sherman Oaks area of Los Angeles County using just twist ties.

However, the program has determined that its initial plans to use twist ties were no longer feasible due to increased captures of male LBAM, limited material available and lack of human resources in the communities of Belmont, Burlingame, Foster City, Hillsborough, Millbrae and San Mateo. The LBAM populations in these areas are no longer isolated more than five miles from any other LBAM infestations.

Another potential ground treatment is using the pheromone male moth attractant treatment technique. This treatment uses a permethrin mixed with a pheromone formulation (California Department of Pesticide Regulation Special Local Need Registration No. CA-080002) to attract the males to the application site where they will die. This technique may be used in the buffer zones around environmentally sensitive areas; contiguous areas with a low level of LBAM detections; and, contiguous areas with heavy populations (more than 50 LBAM detections) conducted in advance of any aerial mating disruption treatment to enhance the efficacy of the aerial mating disruption treatments. The treatment area consists of a 1.5 mile radius around any detection site. The treatments may occur on trees and utility poles on public and private property. All treatment sites will be out of reach of the general public and will occur at 30 to 60 day intervals. Treatments will be applied at a target rate of 3,000 male attractant treatment sites per square mile. Trap density will be nine traps per square mile throughout the treatment area. Again, after two life cycles without any LBAM detections, treatments will cease. Traps will then be deployed at the delimitation trapping density levels for one additional life cycle. If no additional LBAM are detected, this area will be declared free from LBAM.

Another potential ground treatment is using biological control. The affected area may be inundated with a parasitic stingless wasp (*Trichogramma* species). Based on previous history with these and other species, it is estimated that approximately 1,000,000 parasitic wasps per square mile will need to be released.

Finally, foliar ground treatments using organic formulations (when available) of Spinosad or *Bacillus thuringiensis kurstaki* may be made where heavier larval populations are detected.

The last component of the integrated systems approach is aerial applications of a LBAM pheromone to treat denser populations as determined by trap catches. If any aerial applications are applied to any area it will be in compliance with the California Environmental Quality Act. The USDA and the Department will determine which new formulation of the mating disruption pheromone is most efficacious. The California Office of Environmental Health Hazards Assessment (OEHHA) will evaluate any anticipated human health impacts of the formulation used over urban areas and transmit these to physicians in the treatment area. The area for aerial applications is a 1.5 mile radius around each location where LBAM is detected and the public will be provided identifiable treatment boundaries. It is anticipated that aerial applications would be applied at 30 to 90 day spray intervals, depending upon the formulation used, and will continue through the reproductive flight periods of the LBAM (approximately nine months).

Again, after two life cycles without any LBAM detections, treatments will cease. Once the pheromone has dropped to levels that will not interfere with trap efficacy, post-treatment monitoring traps will be deployed and remain in place for one additional life cycle. If no additional LBAM are detected, this area will be declared free from LBAM and trapping levels will return to detection levels (approximately five traps per square mile). The numbers of post-monitoring traps that will be deployed in a static array are still under consideration of the TWG.

The Department will consult with the Department of Pesticide Regulation to ensure adequate environmental monitoring is performed for quality control. Besides working with OEHHA, the Department will consult with any other appropriate governmental agencies concerning threatened and endangered species and sensitive environmental sites, acquiring all needed permits.

Public health concerns will be addressed by OEHHA working with local health officers prior to treatments to ensure that physicians and other health care providers are provided with information on the application, including illness reporting requirements.

The OEHHA will team with other public health organizations to develop and oversee a program for reporting, tracking and scientific evaluation of any reported illness incidents.

The Department, affected county agricultural commissioners and, as appropriate OEHHA, will conduct outreach to elected officials and other interested parties prior to the start of treatment activities. Informational open houses and/or public meetings will be held in each affected county. Residents whose property will be treated will receive written notification prior to treatment. Residents may also sign up for e-mail notification updates on the treatment schedules and areas scheduled to be treated or call an informational phone line to have questions answered. The Department's website will be updated with pertinent information regarding all LBAM treatment activities. Finally, the Department will issue press releases as appropriate.

In March 2008, the United States Department of Agriculture published four revised Environmental Assessments, "Finding of No Significant Impact, Eradication of Isolated Populations of Light Brown Apple Moth in California" for several areas of California including: Carpinteria, Cupertino, Fremont, Moraga and Union City. These environmental assessments were all for the use of pheromone-impregnated twist ties attached to trees, shrubs and other fixture at a rate of 250 per acre. The USDA determined that there would be no impacts to the human environment including nontarget species. The USDA also determined there are no disproportionate adverse effects to minorities, low-income populations or children in accordance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," and Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks."

In January 2008, the United States Department of Agriculture published four revised Environmental Assessments, "Finding of No Significant Impact, Eradication of Isolated Populations of Light Brown Apple Moth in California" for several areas of California including: Half Moon Bay, Pescadero, San Rafael and Treasure Island. These environmental assessments were all for the use of pheromone-impregnated twist ties attached to trees, shrubs and other fixture at a rate of 250 per acre. Again, the USDA determined that there would be no impacts to the human environment including

nontarget species. The USDA also determined there are no disproportionate adverse effects to minorities, low-income populations or children in accordance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," and Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks."

In November 2007, the United States Department of Agriculture published a revised Environmental Assessment, "Finding of No Significant Impact, Eradication of Isolated Populations of Light Brown Apple Moth in California" for the Vallejo area of California. This environmental assessment was for the use of pheromone-impregnated twist ties attached to trees, shrubs and other fixture at a rate of 250 per acre. Again, the USDA determined that there would be no impacts to the human environment including nontarget species. The USDA also determined there are no disproportionate adverse effects to minorities, low-income populations or children in accordance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," and Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks."

In July 2007, the United States Department of Agriculture published four revised Environmental Assessments, "Finding of No Significant Impact, Eradication of Isolated Populations of Light Brown Apple Moth in California" for several areas of California including: Danville, Dublin, San Jose, Sherman Oaks and Vallejo. These environmental assessments were all for the use of pheromone-impregnated twist ties attached to trees, shrubs and other fixture at a rate of 250 per acre. Again, the USDA determined that there would be no impacts to the human environment including nontarget species. The USDA also determined there are no disproportionate adverse effects to minorities, low-income populations or children in accordance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," and Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks."

The USDA also published Environmental Assessments for the Treatment Program for Light Brown Apple Moth in Santa Cruz and Northern Monterey counties (September 2007); and the Seaside Area (July 2007). In July 2007, the USDA published a revised

Environmental Assessment for “Eradication of Isolated Populations of Light Brown Apple Moth in California.”

The Department has also determined that to ensure it conducts the most efficient and effective eradication project with the greatest chances of success, eradication activities will need to begin as soon as possible. This includes, “The searching for all stages of light brown apple moth by visual inspection, the use of traps, or any other means anywhere within the said area.” Additionally, the Department will continue to work with the USDA LBAM Technical Working Group to develop its comprehensive eradication strategy. If necessary, the Department will also propose appropriate emergency amendments Section 3434, Light Brown Apple Moth Interior Quarantine.

The amendment of Section 3591.20(a) established San Benito County as an additional eradication area for LBAM. The entire county is being proposed as an eradication area as ongoing delimitation surveys may result in finds of additional small LBAM infestations outside the current known infested areas. To enable rapid treatment of newly discovered small infestations without frequent amendment of the regulation, the entire county should be established as an eradication area.

The effect of the amendment of this regulation was to establish the State’s authority to perform control and eradication activities against LBAM in San Benito County. Any eradication or control actions undertaken by the Department will be in cooperation and coordination with federal, city, county and other state agencies as deemed necessary by the Department to ensure no long-term significant public health or environmental impacts. To prevent the spread of the LBAM to non-infested areas in order to protect California's agricultural industry and environment, it was necessary to begin eradication activities against the LBAM immediately. Therefore, it was necessary to amend this regulation as an emergency action.

Estimated Cost of Savings to Public Agencies or Affected Private Individuals or Entities

The Department of Food and Agriculture has determined that the amendment of Section 3591.20 does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code.

The Department also has 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 amendment of Section 3591.20.

The cost impact of the changes in the regulations on private persons and businesses are expected to be insignificant.

The Department has determined that the proposed actions will not have a significant adverse economic impact on housing costs or California business, including the ability of California businesses to compete with businesses in other states. The Department's determination that the action will not have a significant statewide adverse economic impact on business was based on the following:

The emergency adoption of Section 3591.20 provides authority for the Department to conduct eradication activities against light brown apple moth within Sonoma County and there are no known private sector cost impacts.

Assessment

The Department has made an assessment that the repeal of the regulation would not 1) create or eliminate jobs within California; 2) create new business or eliminate existing businesses with California; or 3) affect the expansion of businesses currently doing business with California.

Alternatives Considered

The Department of Food and Agriculture must determine that no alternative considered would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

Information Relied Upon

The Department relied upon the following studies, reports, and documents in the proposed adoption and subsequent amendment of Section 3591.20:

“Pest and Damage Record #1550250,” dated April 17, 2008, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Email dated May 15, 2008, from Bob Dowell to Stephen Brown and its attachment.

Letter dated May 15, 2008, from Robert V. Dowell to City Council Member, City Manager or Member of Board of Supervisors.

Canadian Food Inspection Agency Introduces New Regulatory Controls to Prevent the Introduction of Light Brown Apple Moth, printed May 12, 2008

Letter dated May 9, 2008, from Dr. Robert Leavitt to Drs. Dennis Knepp and Jeff Haferman.

Draft revised agenda posted May 1, 2008, Light Brown Apple Moth Environmental Advisory Task Force Meeting, May 5, 2008.

Letter dated May 2, 2008, from Victor C. Mastro to Dr. Robert V. Dowell and its attachment.

2008-2009, Light Brown Apple Moth Action Plan, Updated April 29, 2008.

Light Brown Apple Moth Open House Meeting on Twist Tie Placement in Areas of Cupertino, San Jose and Sunnyvale, undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner’s Office.

Light Brown Apple Moth Open House Meeting on Twist Tie Placement in Areas of Carpinteria, undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner’s Office.

Light Brown Apple Moth Open House Meeting on Twist Tie Placement in Areas of Fremont and Union Cities, undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner’s Office.

Open House Meeting on Eradication Plans Against the Light Brown Apple Moth Detected In Your Neighborhood (Moraga Area), undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner’s Office.

Open House Meeting on Eradication Plans Against the Light Brown Apple Moth Detected In Your Neighborhood (Treasure Island), undated, Official Notice,

Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner's Office.

Open House Meeting on Eradication Plans Against the Light Brown Apple Moth Detected In Your Neighborhood (Half Moon Bay Area), undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner's Office.

Open House Meeting on Eradication Plans Against the Light Brown Apple Moth Detected In Your Neighborhood (Pescadero Area), undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner's Office.

Open House Meeting on Eradication Plans Against the Light Brown Apple Moth Detected In Your Neighborhood (San Rafael Area), undated, Official Notice, Please Read Immediately, California Department of Food and Agriculture, County Agricultural Commissioner's Office.

For Information, DA-2008-17, dated April 28, 2008, to State and Territory Agricultural Regulatory Officials, Federal Domestic Quarantine Order for Light Brown Apple Moth, *Epiphyas postvittana*, Interstate Movement Restrictions from Rebecca A. Bech and its attachments.

Letter dated April 22, 2008, from Dr. Robert Leavitt to Drs. Dennis Knepp and Jeff Haferman and its attachments.

"Should the State Spray Urban Areas?" dated April 16, 2008, San Francisco Chronicle.

"Report Should Put Rest to Moth Spray Concern," dated April 10, 2008, The Herald.

"What They're Saying, About The Interdepartmental Health Report On Past LBAM Treatment," undated, California Department of Food and Agriculture.

"Summary of Symptom Reports in Areas of Aerial Pheromone Application for Management of the Light Brown Apple Moth in Monterey and Santa Cruz Counties, September, October, and November 2007," dated April 10, 2008, Office of Environmental Health Hazard Assessment, Department of Pesticide Regulation, California Department of Public Health.

Light Brown Apple Moth Environmental Advisory Task Force Members, updated April 4, 2008.

States requesting pre-shipment notification for Light Brown Apple Moth regulated materials, Updated April 2, 2008.

Letter dated April 1, 2008, from Dr. Robert Leavitt, to EATF (Environmental Advisory Task Force) members.

Light Brown Apple Moth, "Claims and Responses", last updated April 1, 2008, California Department of Food and Agriculture.

Light Brown Apple Moth (LBAM) Fact Sheet, updated April 1, 2008, California Department of Food and Agriculture.

"USDA Secretary Ed Schafer Speaks on the Light Brown Apple Moth today in Sacramento," dated March 25, 2008, California Department of Food and Agriculture.

Phytosanitary Advisory No. 05-2008, dated March 25, 2008, from California Department of Food and Agriculture to All County Agricultural Commissioners.

California Department of Pesticide Regulation Special Local Need Registration No. CA-080002, Permethrin E Pro Termiticide/Insecticide (EPA Reg. No. 79676-2)/ Utility Poles & Ornamental Trees/ Light Brown Apple Moth (LBAM), dated March 4, 2008, Department of Pesticide Regulation.

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