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.

Description of Specific Facts Which Constitute the Emergency

On September 15, 2009, (Pest and Damage Record (PDR) #1512791) DNA analysis confirmed a suspect *Lobesia botrana* (European Grapevine Moth (EGVM)) larva taken from a trap in Oakville, Napa County, California. This was the first identification of EGVM in the United States. Furthermore, the September 15, 2009 DNA confirmation caused the Department to re-examine an unidentified larva taken from a trap at the same location on September 17, 2008. EGVM DNA sequencing information was not available in 2008 but was available by fall of 2009. With this information on hand, the Department confirmed the 2008 find as EGVM, indicating that an infestation had been present in that area for as long as a year. Additionally, crop damage was reported in the area in 2008 and vineyards were treated for an unknown pest in 2008 and 2009. Significant crop damage was reported in 2009 and at least one grower lost his entire crop.

Following the identification of EGVM, Department staff began an intensive spoke and wheel delimitation trapping program around the find site and on the border with Sonoma County. Eight adults (from five different sites) and 34 larva or pupa have been trapped and identified at 29 separate sites in Napa and Sonoma counties. The trapping survey was discontinued for the winter because the EGVM present entered diapause and will not emerge until the spring. The delimitation results suggest that there may be two distinct pockets of infestation – one on the eastern side of the city of Napa and the other between Oakville and Rutherford and St. Helena. These areas are home to some

of the most well-known vineyards in the United States.

EGVM are found in southern Asia, Europe, North Africa, Anatolia, the Caucasus and in South America (Chile where it was first identified in 2008). Adult EGVM are 6 to 8 mm long with a wingspan of about 10 to 13 mm. However, their size is greatly affected by larval food quality. The first flight of adults occurs in spring when daily average air temperature is above a minimal threshold temperature of 10^{o}C for 10 to 13 days. High temperature (over 20^{o}C) and low humidity (40-70% relative humidity) provide optimal conditions for moth activity. The second flight period begins in summer. Adults may be hard to discover during the day and may be noticed only when they take flight after being disturbed. Within a day or two of mating, females begin to oviposit on the blossoms, leaves, and tender twigs of grapevines. The female lays 300 or more eggs at a rate of 35 per day. First generation eggs are laid on the flower buds or pedicels of the vine while second generation eggs are laid on individual grapes. Eggs hatch in seven to eleven days in spring and three to five days in summer.

The number of generations in a given area is fixed by photoperiod together with temperature. The moth achieves two generations in northern cold areas and usually three generations in southern temperate areas, but as many as five generations have been reported.

First generation larvae feed on bud clusters or flowers and spin webbing around them before pupating inside the web or under a rolled leaf. If heavy flower damage occurs during the first moth generation, the affected flowers will fail to develop and yield will be low. Second generation larvae enter the grapes and feed before pupating inside the grape. Larvae of the third generation, the most damaging, feed on ripening grapes, migrating from one to another and spinning webs. When berries are a little desiccated, the larvae penetrate them, bore into the pulp, and remain protected by the berry peel. Larvae secure the pierced berries to surrounding ones by silk threads in order to avoid falling. Each larva directly damages several berries (one to six), but if the conditions are suitable for fungal or acid rot development, a large number of surrounding berries may also be affected. The third generation larvae leave the fruit and seek shelter under the bark, among dead leaves, or

between clods of earth, where they pupate before overwintering. Larvae develop in four to five weeks in spring and two to three weeks in summer. Pupation lasts nine to twelve weeks in spring, five to seven days in summer, and up to six months in winter.

The EGVM is a serious pest in warm vine-growing countries. Damage by EGVM makes berries attractive to other insects and predisposes the fruit to fungal infection. Larval boring may promote a number of fungal rots, including *Aspergillus, Alternaria, Rhizopus, Cladosporium, Penicillium* and especially, grey rot caused by *Botrytis cinerea*. Loss of up to one-third of the vintage has been reported in areas of the Soviet Union, Syria and Yugoslavia. Losses in Israel sometimes reach 40 to 50 percent among table grapes and up to 80 percent for wine grapes. Further loss is due to the time and labor spent in cleaning the grape bunches. When infestations are heavy, work days spent in cleaning the fruit account for 30 to 40 percent of the time of those involved in harvesting.

Losses in grapes produced for raisins and table grapes are expected to be higher than for wine grapes. Additionally, fresh table grapes will likely face restrictions imposed by some trading partners.

There have been 21 interceptions of EGVM at U.S. ports of entry between 1984 and 2007. All but one interception came from baggage. Most interceptions were live larvae on grapes but interceptions also occurred on persimmon and plum (once each) and twice on pomegranates. The most probable method of EGVM movement within California is human-aided on equipment, fruit or infested propagative material. Though larvae are active, their movement is usually limited to between berry clusters, and virgin females' movement rarely exceeds 80 m.

California's 844,000 acres of grapes (526,000 acres of wine grape, 93,000 acres of table grape and 225,000 acres of raisin-type grapes) leads the nation in grape production with 89% of the total. In 2007, grapes were the number two commodity in the state, based on a dollar value of $3.08 billion dollars, and were among the top three commodities produced in 15 California counties. The retail value of California grapes was valued at $16.5 billion in 2006. Additionally, EGVM is known to

feed on close relatives of plants listed as threatened or endangered in the United States and presents a potential threat to perhaps 24 species, some of which are known to occur only in California. To protect this source of revenue and the environment, California must do everything possible to prevent the spread of EGVM in the State.

The Department initiated a statewide detection trapping survey for EGVM, beginning south of the Tehachapis February 1, 2010 and continuing northward as temperatures rise and adult EGVMs take to the air.

Control measures for EGVM include: insecticides, biological control using *Bacillus thuringiensis* (one study showed 75-90% control), mating disruption (very expensive and only effective if used region wide) and sterile insect technique (not yet reached general commercial application).

The EGVM has the capability of causing significant irreparable harm to California's agricultural industry. 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.

What eradication options the Department intends to implement is dependent upon the size of the infestation, its location(s) and which materials may be registered for use and have adequate efficacy data. Minimally, the searching for all life stages as authorized by the regulation needs to continue throughout California as unknown introduction pathways exist. Additionally, prior to the implementation of any eradication activities, the Department must also comply with any requirements contained in the California Environmental Quality Act.

The Department has also determined that to ensure it conducts any eradication project with the greatest chances of success, some eradication activities authorized by this regulation need to begin as soon as possible. This authority includes, establishing the legal authority for the following: repeated application of pesticides, removal and destruction of any and all possible carriers, searching for all stages of the EGVM by visual inspection, the use of traps, mating disruption, sterile insect technique or any other means, removal and destruction of abandoned or unwanted hosts, plant parts or carriers, requirements to cover equipment used to transport host plants or material, importation and rearing of parasites and predators of EGVM or sterile forms of EGVM. Due to the new immediate threat posed by the known EGVM population in Napa, the Department needs to immediately establish it has the legal authority to conduct EGVM surveys without its having to rely on property owners voluntarily granting access in order to complete the surveys.

The effect of the adoption of this regulation will be to implement the State's authority to search for all stages of the EGVM by visual inspection, the use of traps, mating disruption, sterile insect technique or any other means. The effect of the adoption of this regulation will also be to establish the hosts and possible carriers and the means and methods to perform suppression, control and eradication activities against EGVM throughout California. Any eradication or control or suppression 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 and adhere to the Department's obligations under CEQA. To detect EGVM and prevent its spread to non-infested areas, and to protect California's agricultural industry and environment, it is necessary to search for all life stages of EGVM immediately. Therefore, it is necessary to adopt this regulation as an emergency action.

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

Final Report of the International Technical Working Group for the European Grape Vine Moth (EGVM) in California, dated February 10, 2010.

Email, dated February 8, 2010, from Kevin Hoffman to Stephen Brown and its attachment.

Email, dated February 8, 2010, from John Hooper to Stephen Brown and its attachment.

Email, dated February 4, 2010, from Eileen Y. Smith to Helene R. Wright and its attachment.

Pest and Damage Record #1586125, dated December 2, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586789, dated November 17, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586786, dated November 13, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586785, dated November 13, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586052, dated November 4, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586051, dated November 3, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1586050, dated November 3, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

Pest and Damage Record #1560473, dated November 3, 2009, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

New Pest Advisory Group Report, *Lobesia botrana* (Denis & Schiffermuller): European Grapevine Moth, dated October 14, 2009.

United States Department of Agriculture Press Release, National Agricultural Statistics Sevice, posted online October 9, 2009.

United States Department of Agriculture California Grape Acreage Report, 2008 Summary, released March 31, 2009.

Agricultural Statistical Review, California Agricultural Resource Directory 2008-2009.

Mini Risk Assessment, Grape berry moth, *Lobesia botrana* (Denis & Schiffermuller) (Lepidoptera Tortricidae), Robert C. Venette, et. al., September 5, 2003.

International Standards for Phytosanitary Measures, ISPM No. 8, Determination of Pest Status in an Area, 1998.

Authority and Reference Citations
Authority: Sections 407 and 5322, Food and Agricultural Code.
Reference: Sections 407, 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 (Food and Agricultural Code, Sections 401, 403, 407 and 5322).

Section 3591.24. European Grapevine Moth Eradication.

The adoption of Section 3591.24 will establish the entire state of California as an eradication area for *Lobesia botrana*. The effect of the amendment is to provide specific authority for the State to perform control and eradication activities against European Grapevine Moth within the state to prevent spread of the moth to noninfested areas to protect California's agricultural industry.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that Section 3591.24 does not impose a mandate on local agencies or school districts.

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.