

DEPARTMENT OF FOOD AND AGRICULTURE  
PROPOSED CHANGES IN THE REGULATIONS

Title 3, California Code of Regulations

Section 3591.2, Subsection (a)

Oriental Fruit Fly 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 California Department of Food and Agriculture (Department) to protect the agricultural industry from the movement and spread of injurious plant pests within California.

Purpose

The specific purpose of Section 3591.2 is to expand the area in which the State may eradicate infestations of *Bactrocera dorsalis*, Oriental fruit fly (OFF) using established means and methods.

Factual Basis

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

The OFF is a destructive insect pest of over 230 agricultural crops. Fruits (including nuts, dates, and berries), many kinds of vegetables, and the fruiting bodies of many wild and ornamental plants are known to be hosts or possible hosts of the Oriental fruit fly. Larval feeding reduces the interior of fruit to a rotten mass. Egg punctures admit decay organisms that cause tissue breakdown. Damaged fruit is generally unfit for human consumption.

The Department, along with county partners, carries out statewide ongoing detection trapping for OFF, a federal and state actionable pest. If OFF is found in a county outside the current eradication area, then an emergency regulation is promulgated to allow fruit fly eradication actions within that county. Although this is a fairly rapid process, it often results in short delays

of eradication activities. To date, the Department has been very effective at stopping incipient infestations of OFF. However, even short delays in beginning control activities can make the difference between a short programmatic action and an OFF quarantine, which results in significant costs caused by growers being unable to transport fruit, destroying contaminated fruits, and treatment to eliminate the infestation. In order to prevent the imposition of quarantines caused by delay, the Department is using information from past detections of OFF to predict the counties in which there is a high risk of OFF detection in the future.

On January 14, 2021, the Department concluded a new modeling risk analysis using Maximum Entropy (MaxEnt). MaxEnt is a modeling algorithm that identifies risk of infestation based on presence-only data (in this case, the presence of OFF, and user-defined variables (such as human population and presence of transportation hubs). A technical analytical group within the Department developed this model for OFF using the process outlined in the paper “Maximum entropy modeling of species geographic distributions”, 2006. The relevant model produced by MaxEnt shows 16 counties outside the current eradication area described in Section 3591.2, but in which there is a high risk of future OFF detection (Oriental Fruit Fly Reallocating Methyl Eugenol Traps Project Description, 2021). Although climate change projections were not included in the model, the warmer years that California has experienced recently are expected to increase the chances of finding OFF in areas that are amenable to OFF introduction, but have not yet been included as eradication areas.

Relying on modeling based on prior detections and human based behavior to determine areas that are at high risk allows the Department to be better prepared for further detections. This amended regulation will avoid harm to the public’s general welfare by allowing the Department to quickly implement control and eradication activities against OFF if it is found in the counties of Butte, Colusa, Humboldt, Imperial, Marin, Merced, Monterey, Napa, Nevada, Placer, San Francisco, Solano, Sonoma, Stanislaus, Sutter, and Yuba, and thereby lower the risk of triggering a quarantine.

If a certain quantity of OFF is found within a certain area and period of time, then an internal fruit fly quarantine is established in the area of detection. Many of the host fruits attacked by the OFF are enjoyed by the home gardener and community gardens. If a fruit fly quarantine is triggered, then backyard growers of host fruit within the quarantine zone cannot move their fruit and, in

some cases, fruit is removed and destroyed to prevent OFF spread. Such quarantines cost host commodity growers and produce sellers time and resources to comply with quarantine requirements. These costs depend upon circumstances, but a 2011 OFF quarantine cost between \$146,017 and \$738,672 (Annual Estimated Impact Report) for compliance. In addition, the costs to the Department for quarantine enforcement and treatments generally amount to between one and two million dollars. The amendment of this regulation will help ensure the maintenance of the current economic baseline. Prevention of costs of pest quarantines to the California public and the Department help preserve the economic baseline and maintain the welfare of the California.

## PROJECT DESCRIPTION

To prepare for potential future infestations, the Department is seeking to amend Section 3591.2 to include these 16 counties. The counties to be added to the eradication area are Butte, Colusa, Humboldt, Imperial, Marin, Merced, Monterey, Napa, Nevada, Placer, San Francisco, Solano, Sonoma, Stanislaus, Sutter, and Yuba.

## Current Laws & Regulations

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

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

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

Existing law, FAC section 5761, provides that regulations which are adopted pursuant to Article 2 (commencing with Section 5321 ) of Chapter 5, Part 1 of this division may proclaim any

portion of the state to be an eradication area with respect to the pest, prescribe the boundaries of such area, and name the pest and the hosts of the pest which are known to exist within the area, together with the means or methods which are to be used in the eradication or control of such pest.

Existing law, FAC section 5762, provides that any pest with respect to which an eradication area has been proclaimed, and any stages of the pest, its hosts and carriers, and any premises, plants, and things infested or infected or exposed to infestation or infection with such pest or its hosts or carriers, within such area, are public nuisances, which are subject to all laws and remedies which relate to the prevention and abatement of public nuisances.

Existing law, FAC section 5763, provides that the director, or the commissioner acting under the supervision and direction of the director, in a summary manner, may disinfect or take such other action, including removal or destruction, with reference to any such public nuisance, which they think is necessary.

Existing law, FAC section 5764, provides that if an eradication area has been proclaimed with respect to a species of fruit flies and the removal of host plants of such species is involved, the director may enter into an agreement with the owner of such host plants to remove and replace them with suitable nursery stock in lieu of treatment. Any expenditures for the replacement nursery stock shall not exceed an amount which is budgeted for the purpose or approved by the Director of Finance.

Existing law, CCR Section 3591.2, defines the state's eradication areas for OFF.

The existing law obligates the Secretary to investigate and determine the feasibility of controlling or eradicating pests of limited distribution but establishes discretion with regard to the establishment and maintenance of regulations to achieve this goal. This amendment provides the necessary regulatory authority to prevent the artificial spread of a serious insect pest, which is a mandated statutory goal.

#### Anticipated Benefits from This Regulatory Action

This regulation will benefit the public's general welfare by adding Butte, Colusa, Humboldt, Imperial, Marin, Merced, Monterey, Napa, Nevada, Placer, San Francisco, Solano, Sonoma, Stanislaus, Sutter, and Yuba to the eradication area for OFF, which will allow the Department to conduct control and eradication activities in these counties. By using modeling to determine which counties to add to the eradication areas, the Department increases the chances of being able to act quickly and effectively if an OFF is detected.

The implementation of this regulation will help prevent potential:

- direct damage to the agricultural industry growing host fruits
- indirect damage to the agricultural industry growing host fruits due to the implementation of quarantines by other countries and loss of export markets
- increased production costs to the affected agricultural industries
- increased pesticide use by the affected agricultural industries
- increased costs to the consumers of host fruits
- increased pesticide use by homeowners and others
- the need to implement a State interior quarantine
- the need to implement a federal domestic quarantine

#### Evaluation of Inconsistency/Incompatibility with Existing State Regulations

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

#### California Environmental Quality Act

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

The EIR may be accessed at the following website:

<http://www.cdfa.ca.gov/plant/peir/>.

### Mandate on Local Agencies or School Districts

The Department has determined that Section 3591.2 does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code.

### Economic Impact Analysis

The prevention of the spread of OFF in California through improving response times via the amendment and implementation of this regulation prevent economic harm too:

- the general public
- homeowners and community gardens
- agricultural industry
- the State's general fund.

Any needed future treatments are part of our general exotic fruit fly treatment program.

Currently, when a fruit fly is detected in a county without eradication authority, the state starts the process to gain authority to treat for that fruit fly. By preemptively having authority in high risk counties, treatment can begin as soon as the infestation is detected, thus limiting the time the infestation has to grow and move. The Department is currently monitoring for fruit flies, and thus there is no change to the cost due to this regulation.

### Assessment

The amendment is designed to minimize the spread of OFF by reducing the response time and prevent the imposition of quarantines. Compliance activities are currently being performed by existing state staff throughout quarantine areas within the State. Therefore, the Department has determined that this regulatory proposal will 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.

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

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 subsection 3591.2. This amended regulation will help maintain the current economic baseline.

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. 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 amendment of subsection 3591.2 will provide authority for the State to perform control and eradication activities against OFF in Butte, Colusa, Humboldt, Imperial, Marin, Merced, Monterey, Napa, Nevada, Placer, San Francisco, Solano, Sonoma, Stanislaus, Sutter, and Yuba in the eventuality of a detection in these counties and there are no known private sector cost impacts.

### 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 as and less burdensome to affected private persons than the proposed action.

The Department considered taking no action. However, this would potentially result in further quarantines throughout the State with the concomitant economic and operational impacts on host commodity producers, venders, and home growers.

### Information Relied Upon

The Department relied upon the following studies, reports, and documents in the proposed adoption and subsequent amendment of Section 3591.2:

“Action Plan for METHYL EUGENOL ATTRACTED FRUIT FLIES including the Oriental Fruit Fly” *Bactrocera dorsalis* (Hendel)” California Department of Food and Agriculture Plant Health and Pest Prevention Services and Pest Detection/Emergency Projects Branch

Maximum entropy modeling of species geographic distributions”, Phillips, Steven J.; Anderson, Robert P.; and Schapire, Robert E. *Ecological Modelling* 190 (2006) 231-259

“Oriental Fruit Fly Reallocating Methyl Eugenol Traps Project Description”, California Department of Food and Agriculture, 1/14/2021

“Oriental Fruit Fly Fact Sheet” California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

“Reallocating ME Traps Project Description” January 14, 2021, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.