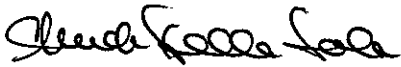


**CITY OF MONTEREY**

To: City Council  
From: Mayor Della Sala  
Date: September 24, 2007  
Subject: Resolution Declaring the City Council's Position Regarding Aerial Spraying for the Light Brown Apple Moth

I would like to recommend to you for adoption the attached resolution pertaining to the continued aerial spraying for the Light Brown Apple Moth.



Chuck Della Sala

RESOLUTION NO.

RESOLUTION DECLARING THE CITY COUNCIL'S POSITION PERTAINING TO  
AERIAL SPRAYING FOR THE LIGHT BROWN APPLE MOTH

\* \* \* \* \*

WHEREAS, the Light Brown Apple Moth is a pest subject to Federal and State quarantine and eradication orders; and

WHEREAS the presence of the Light Brown Apple Moth has been discovered in Monterey County; and

WHEREAS, the aerial spraying intended to control the reproduction of the Light Brown Apple Moth has generated concerns related to the safety of the products in use; complaints of symptoms that some attribute to the spraying; and concerns regarding the nature of the public outreach effort intended to communicate the nature of the Light Brown Apple Moth emergency and the abatement of this pest.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MONTEREY that the City Council declares its opposition to aerial spraying of pheromones to control the Light Brown Apple Moth unless and until the following conditions have been met: 1) the public is furnished additional assurances that the products in use are proven safe for contact with humans, animals, and the environment, including the Monterey Bay National Marine Sanctuary; 2) an adequate public communications plan pertaining to the spraying efforts is put into place; and 3) an empirical post-spraying health impact analysis is conducted.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF MONTEREY on the \_\_\_\_\_ day of \_\_\_\_\_, 2007, by the following vote:

AYES : COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

-----  
APPROVED:

/s/ Chuck Della Sala  
Mayor of said City

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# Assembly California Legislature

JOHN LAIRD  
ASSEMBLYMEMBER, TWENTY SEVENTH DISTRICT

COMMITTEES  
Chair, BUDGET  
JUDICIARY  
LABOR & EMPLOYMENT  
NATURAL RESOURCES

September 24, 2007

A. G. Kawamura  
Secretary  
Department of Food and Agriculture  
1220 N Street, Room A-400  
Sacramento, California 95814

Dear Secretary Kawamura:

I appreciated our latest conversation regarding the aerial spraying for eradication of the Light Brown Apple Moth (LBAM) in Monterey County. In that conversation, I indicated that with the marathon last weeks of the legislative session now over, I would again review the latest developments on this issue with my staff members. It is clear from the constituent contacts with my local office – by phone, e-mail, letter and office visits – that the public process surrounding this issue was sorely lacking. I know you demonstrated your personal concern by being present for the spraying, which is admirable, and that you want a better process going forward – in both continued efforts in Monterey County and the coming eradication effort in Santa Cruz County. I wanted to use this letter to set out in a clear manner my advice to the Department as you continue to grapple with this issue.

I remain concerned that not everyone within California Department of Food and Agriculture (CDFA) has fully grasped the breadth of the Department's failure to address public concerns or how contentious aerial spraying is in Monterey County and will be in Santa Cruz County.

While some residents adamantly oppose aerial spraying in principle, the vast majority of residents who oppose the spraying in Monterey County do so because they are sincerely concerned about their health and the health of their loved ones. They have reasonable questions about the science that have not been answered thoroughly or in a manner they understand. They remain unconvinced that aquatic invertebrates in the Monterey Bay National Marine Sanctuary will not be impacted, and believe CDFA overlooked the Sanctuary's concerns. CDFA's handling of the process has fueled residents' anxieties and suspicions to such an extent that many residents believe CDFA is willing to move ahead regardless of whether concerns about their own health have been adequately addressed.

I cannot overstate that merely fine-tuning messaging or hosting a few more open house events a week or so before aerial spraying is scheduled will be woefully inadequate to relieve public concern. It is critically important CDFA take immediate and meaningful action to ensure there is a good public process based on sound science going forward, even if it means delaying further aerial spraying.

#### *Public Process Concerns*

The manner in which the Monterey area spraying was begun led to public concern that CDFA is not being expeditious or entirely forthright in providing information about its plans. While CDFA is apparently planning a second application in Monterey County on or around October 8, the Department still has given no indication whether it intends to have further public consultation beforehand. On September 19, staff from the US Department of Agriculture (USDA) and CDFA stated the 2007 eradication activities would need to be completed by mid-November. Meanwhile, we are told concrete plans have not been developed in Santa Cruz County, but some sort of public process is planned for mid-October. How the Department decides further public process proceeds will strongly influence how the public receives any future Department actions.

As you know, the two open house events in Seaside and Monterey left many residents extremely frustrated. A forum was organized only after the City of Monterey called on the CDFA to postpone their plans until the public's concerns had been addressed. The forum was intended to give residents an opportunity to ask questions and express their concerns. However, according to my staff, many residents who submitted questions or spoke felt strongly they were not receiving forthright responses to some key questions. I appreciate CDFA's responsiveness to the City of Monterey's request, as well as the fact you personally attended the forum. However, I expect CDFA to reflect on this event to ensure future forums are more productive.

The notification process has also been highly unsatisfactory. The CDFA's website states "residents in the affected area will be notified in writing at least 72 hours prior to the aerial application of the pheromone." While residents received notification in English and in Spanish well in advance of the September 5-7 dates, notification postcards for the September 9-11 spraying started arriving 48 hours in advance and were only in English. When my office brought this to the Department's attention, CDFA staff stated the Department is only legally required to provide notification 24 hours in advance, because the eradication program is being done on an emergency basis. Resorting to this purely legalistic interpretation might well cover the Department on a legal basis, but was a public relations disaster that only served to fuel suspicions that spraying was being unnecessarily rushed. Moreover, my office has received dozens of complaints from residents in the eradication zone claiming they never received notification in the mail.

Since the spraying took place, my office has been forwarded nearly 80 emails from residents who report they or their family members are experiencing health problems. Residents are being advised to go to their physician who can then submit a report to

officials. The standard of proof to demonstrate a causal relationship between spraying and many of the symptoms described in the attached emails is extraordinarily high and perhaps impossible. Given the fact aerial spraying of the CheckMate products has never occurred over an urban area, I strongly encourage you to create a dedicated LBAM health hotline to record residents' complaints. I believe it is vitally important this information is compiled and analyzed, particularly given the fact there is no existing data on the potential human health impacts of aerially spraying the CheckMate products.

### *Unanswered Questions*

One key question in particular has not been answered to the public's satisfaction. Residents are dismayed when they discover the inert ingredients in the CheckMate products are a trade secret. Describing the nature of the inert ingredients as an "organic polymer" or "urea" has not allayed their concerns. I therefore believe this information should be disclosed. By providing this information in a way that does not disclose Sutterra's specific, protected formulation, the CDFA could make significant strides in reducing the public's health fears.

In addition, many residents are not convinced the pheromones in the CheckMate products are safe for humans based on animal studies of other pheromones. You have stated on several occasions that "pheromones are among the most environmentally friendly treatments ever used to eradicate a pest infestation in California." Unfortunately, CDFA's credibility among the public has now been severely strained. I strongly encourage you to arrange a third-party literature review of all relevant scientific studies on the human health and environmental safety of pheromones. The conclusions of this review should be presented in a non-scientific format in advance of any future spraying.

### *Aerial Spraying Process*

In the public forum on August 29, it was stated more than once that the California Department of Pesticide Regulation (DPR) would be monitoring the spraying. However, a DPR memorandum dated August 27 from Jay Schreider, Primary State Toxicologist, and David Kim, Environmental Scientist, states, "no environmental monitoring is needed for any of the application methods described on the labels." It would be helpful to public concern to explain this apparent discrepancy as well as whether DPR conducted environmental monitoring in Monterey County on September 9-12.

In addition, we received numerous complaints about CDFA's change of plans each night when the spraying was happening. Residents who had cleaned their outside furniture, for example, found it frustrating to learn their neighborhood had not been sprayed, but would be the following evening. Several residents who do not live in proximity of the airport report they heard and/or saw the planes fly back and forth over the same area multiple times throughout the night. A number of residents are resolute their neighborhoods were sprayed more than once.

One resident from Pacific Grove reported he sat outside for an hour and a half and watched one plane make 10 round trips over the same track. His concern is not with the aerial spraying per se, but rather if it has to be done, it should be done effectively.

While these concerns are beyond my personal ability to verify, the frequency with which my office heard these types of complaints demonstrates that the CDFA needs to establish procedures for public notification before, during and after eradication activities. The public is entitled to the most up-to-date information on all aspects of the CDFA's eradication program.

### *Eradication Plan*

An additional major public relations problem is that CDFA cannot be more specific about when the LBAM eradication plan and associated environmental assessment (EA) will be available.<sup>1</sup> I am also concerned CDFA could be considering the use of ground-based application of insecticides for high-infestation areas.

Presently, CDFA is exempt from conducting a CEQA review of its eradication activities. An environmental impact statement will not be required for aerial spraying of the CheckMate products at any point, and a Section 18 exemption has been granted for these products until 2010 (when normally they are only granted annually). But according to the environmental assessment for the Seaside Area, "An eradication plan is in development and, if implemented, will likely call for the use of pheromone treatments alone or in conjunction with *other chemical treatments* (emphasis added)." I am deeply concerned that CDFA may adopt the use of insecticides for dealing with high infestations in heavily populated areas when emergency exemptions are in place. I cannot understate the gravity of such a decision and the public health and public process issues that would come from it.

Along similar lines, several nursery owners in my district have contacted my office to express their concerns about the blanket spraying of chlorpyrifos in the nursery setting. The nursery industry believes the same control can be achieved within a bona fide Integrated Pest Management (IPM) program by spot treatment with chlorpyrifos and the use of less toxic compounds applied to the remaining nursery stock. I strongly encourage the CDFA to work quickly toward a more sustainable alternative that would reduce the use of harmful chemicals, thereby reducing the potential of chlorpyrifos reaching sensitive environmental ecosystems, including the Sanctuary. If you would like a meeting with these nursery owners, I would be happy to set it up on an expedited basis.

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<sup>1</sup> The EA for the "Seaside Area in California" and the "Finding of No Significant Environmental Impact" (FONSI) both state an eradication plan is being developed. The FONSI also states an EA will be completed on the eradication plan when it is finalized.

## *Research*

Going forward, I would like CDFA to provide more information about ongoing research activities to deal with LBAM, particularly findings that led the CDFA to conclude pheromone mating disruption would be successful and feasible in California. The University of California's IPM program has published two versions of "Light Brown Apple Moth in California: Quarantine, Management and Potential Impacts" on July 17 and September 12, 2007. On Page 10, the July version states, "Research is needed to determine if LBAM mating disruption would be successful and feasible in California." This sentence has been deleted in the September version, which now states, "Mating disruption currently is the primary tool being used by the CDFA for the eradication effort in California."<sup>2</sup> I would appreciate knowing the details of research that has been completed between July and September leading to this new conclusion. Additionally, I request a written status report on what research is being conducted, including studies on sterile moth technology, and estimated dates of completion.

As I have previously stated, I believe third-party review based on sound science is a critical element in the public review process. When the public did not feel adequately served by CDFA's process in Monterey after it decided to move forward quickly with the aerial spraying, I undertook to ask the questions the public was asking about the science and views of various interested parties.

I followed up with 20 government agencies and nongovernmental organizations, asking them to provide their expert opinion on whether CDFA's plans for multiple aerial spraying could negatively affect public health and the environment. The Natural Resources Defense Council and the Pesticide Action Network North America have responded and expressed their support for the type of Integrated Pest Management the CDFA is undertaking. The American Cancer Society responded, "Members of our team reviewed state and federal information on these pheromone products and concluded that this is outside our purview in that there isn't evidence of risk associated with cancer due to exposure to these products."

While these responses support CDFA's contention that pheromones are a safe and effective way of dealing with invasive species like LBAM, I would like to see more concerted efforts by the Department to carry out a third-party review. I am still pursuing answers from the additional organizations and agencies that I contacted.

As you know, I was disappointed CDFA moved ahead with the first round of spraying in Monterey County despite clear opposition from a number of local elected officials and

---

<sup>2</sup> UC report comparison Page 10: Mating disruption is commonly used in California fruit orchards for peach twig borer, oriental fruit moth, and codling moth. Mating disruption has not worked well with various leafroller species. However, in Australia LBAM has been managed in citrus, grapes, and other crop systems using mating disruption. **Mating disruption currently is the primary tool being used by the CDFA for the eradication effort in California.** ~~Research is needed to determine if LBAM mating disruption would be successful and feasible in California. Currently, n[ovel] strategies to employ synthetic pheromones for LBAM suppression are being investigated in Australia and New Zealand, and these may be available in the future for California.~~

my call for a delay. However, after our conversation earlier this week and knowing that, as an organic farmer, you are committed to protecting human health and the environment, I am confident you will give my requests and recommendations your full attention. I stand ready to meet with you, and assist in arranging meetings with any of my constituents, local agencies, or local elected officials that you may find desirable.

Sincerely,



**JOHN LAIRD**, Assemblymember  
27th District

JL:cf

Attachment: Compilation of citizens' health complaints (*sent to CDFA only*)

Cc: Governor Arnold Schwarzenegger  
Senator Barbara Boxer  
Senator Dianne Feinstein  
Congressmember Anna Eshoo  
Congressmember Sam Farr  
State Senator Jeff Denham  
State Senator Abel Maldonado  
State Senator Joe Simitian  
Superintendent Paul Michel, Monterey Bay National Marine Sanctuary  
Lawrence Hawkins, United States Department of Agriculture  
Helene Wright, United States Department of Agriculture  
Mary-Ann Warmerdam, Director, California Department of Pesticide Regulation  
Monterey County Board of Supervisors  
Santa Cruz County Board of Supervisors  
Mayor Dene Bustichi, City of Scotts Valley  
Mayor Dan Cort, City of Pacific Grove  
Mayor Chuck Della Sala, City of Monterey  
Mayor Sue McCloud, City of Carmel  
Mayor Mettee-McCutchon, City of Marina



Mayor David Pendergrass, City of Sand City  
Mayor Emily Reilly, City of Santa Cruz  
Mayor Ralph Rubio, City of Seaside  
Mayor Manuel Quintero Bersamin, City of Watsonville  
Mayor Joseph Russell, City of Del Ray Oaks  
Mayor Michael Termini, City of Capitola  
Ken Corbishley, Agricultural Commissioner, Santa Cruz County  
Eric Lauritzen, Agricultural Commissioner, Monterey County  
Bill Hammond, Monterey County Farm Bureau  
Bob Perkins, Monterey County Farm Bureau  
Steve Bontadelli, Santa Cruz County Farm Bureau  
Dave Cavanaugh, Santa Cruz County Farm Bureau  
Sharen Muraoka, American Cancer Society  
Gina Soloman, Natural Resources Defense Council  
Dr. Marcia Ishii-Eiteman, Pesticide Action Network North America

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# Assembly California Legislature

JOHN LAIRD

ASSEMBLYMEMBER, TWENTY SEVENTH DISTRICT

COMMITTEES  
Chair, BUDGET  
JUDICIARY  
LABOR & EMPLOYMENT  
NATURAL RESOURCES

September 6, 2007

Dear Friend,

I am writing to request your review of the California Department of Food and Agriculture's (CDFA) multi-stage process to disrupt Light Brown Apple Moth (LBAM) mating in the Monterey Peninsula area by aerial application of two pheromones: CheckMate OLR-F and CheckMate LBAM-F.

According to the CDFA, because the LBAM feeds on hundreds of different kinds of plants, it presents a threat to trees and plants in the natural environment as well as to crops and landscaping. Cypress and redwood trees, Monterey pine, oaks, lupines and many other native species are included on the extensive "host list" for this pest.

Significant portions of my district have been designated eradication areas, which include portions of Monterey, Santa Cruz and Santa Clara counties. CDFA's plans include multiple phases of aerial spraying in Monterey County, as well as an as-yet-unspecified plan to spray in Santa Cruz County (where the infestation is much worse). Constituents from throughout my district have contacted me to express their deep concerns about CDFA's plans.

CDFA Secretary Kawamura has said, "pheromones are among the most environmentally friendly treatments ever used to eradicate a pest infestation in California." Additionally, California Certified Organic Farmers (CCOF) has announced its support of CDFA's aerial spraying plan based in part on the USDA National Organic Program's approval of the use of the Checkmate pheromone in organic agriculture.

On the other hand, I am hearing numerous concerns from residents. For instance, some are suspicious of assurances that CheckMate OLR-F and Checkmate LBAM-F are safe, based on animal studies of other pheromones. The pheromone will be delivered in what has been described as an organic polymer that will biodegrade in about a month. Reportedly, the inert ingredient(s) have never been tested or used in an aerial application over an urban area. Residents are extremely concerned about the short- and long-term human health and environmental impacts of what is perceived to be large quantities of pheromone, plus an unknown and potentially toxic substance being aeri ally sprayed on multiple occasions over a highly populated area.

Additional concerns as outlined in recent news on this controversy may be found on my Website at: <http://democrats.assembly.ca.gov/members/a27/>

The LBAM situation is urgent, complicated and involves public health, the environment and the local economy. I have said publicly that before pursuing any plan to spray, we need to have a comprehensive public process that emphasizes sound science. Unfortunately, before that comprehensive public process could take place, Secretary Kawamura directed initial spraying to take place in Monterey County on September 9, 10 and 11, with additional applications to follow.

In my opinion, third-party review based on sound science is a critical element in the public review process. Even though spraying is scheduled to move forward, I still believe that a third-party review process is needed. **Therefore, I would appreciate your assistance by providing me your expert opinion on whether aerial application of CheckMate OLR-F and CheckMate LBAM-F presents a threat to human health and/or the environment, as well as a statement of support or opposition for the plan.** I would appreciate your response in writing as soon as possible.

For more information about CDFA's plans, please go to:  
[www.cdfa.ca.gov/phpps/PDEP/lbam/lbam\\_main.html](http://www.cdfa.ca.gov/phpps/PDEP/lbam/lbam_main.html)

If you need further information, please don't hesitate to contact Colleen Freeman, at 831-649-2832 or [colleen.freeman@asm.ca.gov](mailto:colleen.freeman@asm.ca.gov).

Thank you in advance for any assistance you can provide.

Sincerely,

A handwritten signature in black ink that reads "John Laird". The signature is written in a cursive, slightly slanted style.

JOHN LAIRD, Assemblymember  
27th District

## Freeman, Colleen

---

**From:** Sharen.Muraoka@cancer.org  
**Sent:** Thursday, September 13, 2007 10:34 AM  
**To:** Freeman, Colleen  
**Cc:** Alecia.Sanchez@cancer.org; Jim.Knox@cancer.org; mimiyu@umn.edu; Carolyn.Bruzdinski@cancer.org  
**Subject:** Light Brown Apple Moth



1945 - segawa.pdf  
(41 KB)

Hello Colleen,

Thank you for contacting us about LBAM pheromones. I told Alecia Sanchez I would get back to you with information.

The American Cancer Society has a team of volunteers and staff who review environmental issues related to cancer risk and advise the Society on appropriate actions to take. Members of our team reviewed state and federal information on these pheromone products and concluded that this is outside our purview in that there isn't evidence of risk associated with cancer due to exposure to these products. I am attaching the state and federal information we reviewed and hope it is helpful.

[http://www.epa.gov/pesticides/local/region9/lbam\\_quarantine.htm](http://www.epa.gov/pesticides/local/region9/lbam_quarantine.htm)

[http://www.cdfa.ca.gov/phpps/pdep/lbam/pdfs/LBAM\\_Q&A.pdf](http://www.cdfa.ca.gov/phpps/pdep/lbam/pdfs/LBAM_Q&A.pdf)

(See attached file: 1945 - segawa.pdf)

Thanks again for giving us the opportunity to provide comment. Please let us know if we can do anything further.

Sharen

Sharen Muraoka  
Director, Policy  
Government Relations Office  
American Cancer Society, California Division, Inc.  
1215 K Street, Suite 1850  
Sacramento, CA 95814  
916-448-0500, extension 304  
916-447-6931 FAX  
Sharen.Muraoka@cancer.org



NATURAL RESOURCES DEFENSE COUNCIL

September 8, 2007

Assemblymember John Laird  
State Capitol  
P.O. Box 942849  
Sacramento, CA 94249-0027

Dear Assemblymember Laird:

Thank you for your inquiry about the Light Brown Apple Moth (LBAM), and the California Department of Food and Agriculture's (CDFA) plan to begin aerial application of pheromones in an effort to control this pest. NRDC scientists have investigated the planned application, and reviewed the available data on the pheromone products (CheckMate OLR-F and CheckMate LBAM F) that will be used. At this time, we believe that the CDFA plan appears to be sound and is the safest and most effective approach. Therefore NRDC supports the plan.

As you know, NRDC is on record opposing most aerial applications of pesticides. Instead, we favor methods that rely on the principles of Integrated Pest Management (IPM). For example, we have frequently opposed the widespread use of toxic insecticides and advocated for use of pheromones instead. Therefore, we applaud CDFA's decision to use an approach to the LBAM that relies on the principles of IPM and that uses a pheromone-based approach instead of toxic insecticides. We hope that the prompt use of such a strategy will help to avert future use of insecticides to control this pest. The products that will be used do not contain toxic insecticides. Instead they contain a chemical that is essentially a specific perfume that acts as an attractant for male Light Brown Apple Moths. The male moths will fly around pursuing the scent of females, and will ultimately die of natural causes before they succeed in locating a real female moth.

The pheromone is unlikely to have any effects on humans, and the documentation we have received from CDFA states that the product is mixed only with water and urea, neither of which will have toxic effects on humans or other animals. We understand that many people in the areas that are proposed to be treated are quite concerned, and we are receiving phone calls from our members about this issue. It does indeed appear alarming to have something sprayed in the air over your community. However, in this case, we believe that the concerns reflect a misunderstanding about the plan, rather than a real health-based issue. Communities that have experienced aerial spraying of insecticides in the past may be rightly suspicious and concerned. Fortunately, in this case, CDFA has chosen a different path, and should be commended for designing a program that relies on non-toxic methods.

Sincerely,

Gina M. Solomon, M.D., M.P.H.  
Senior Scientist



# Pesticide Action Network North America

Advancing alternatives to pesticides worldwide

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## Light Brown Apple Moth in California

According to the California Department of Food and Agriculture (CDFA), the Light Brown Apple Moth (LBAM) "is an exotic pest that has recently been discovered in portions of the San Francisco Bay Area and Los Angeles. LBAM is a native pest to Australia and has been introduced into New Zealand, New Caledonia, Hawaii, the United Kingdom and Ireland. This moth can affect a wide variety of plants, flowers, fruits and vegetables."



On Sept. 9-11, CDFA launched an aerial application of "Checkmate," -- a pheromone-based product approved for organic farming to control LBAM -- over agricultural and populated areas of Monterey County. (Checkmate Español) While Checkmate has been used widely on crops, this is, as far as PANNA knows, the first time it has been applied over areas where people live. There has also been some concern about damage to sensitive marine life off the Monterey coast.

Pheromones (sexual perfumes for insects) are used in mating disruption technologies and are believed to pose no substantial environmental or human health threats. The goal is to control a rapidly growing infestation of the LBAM in Monterey to "box in" a larger

Health Effects

- Food Quality Protection Act (FQPA)
- Genetic Engineering
- Human Testing
- Hunger and Food Security
- Labor and Occupational Safety

→ Light Brown Apple Moth

- Methyl Bromide
- Persistent Organic Pollutants (POPs)
- Pesticides and Autism
- Regulation and Government
- Sustainable Agriculture
- Pesticide Use
- World Bank
- © Campaigns and Projects

infestation in Santa Cruz County, immediately to the north. "In most other places [in the state so far], the *Los Angeles Times* reports, "the battle is waged with pheromone-soaked twist-ties looped around plants and branches. But the numbers are too high and the area too great for that to work on the Monterey Peninsula, said state officials."

In recent months as state and U.S. federal agencies, and international and academic experts, have considered responses to LBAM, chlorpyrifos and malathion -- both highly hazardous organophosphate pesticides -- have also been proposed to "eradicate" the moth. It is encouraging that safer alternatives are now proposed. See information below on traps, twist-ties (Isomate LBAM Plus) and localized ground-level spraying of the organic insecticide, Bacillus thuringensis (Bt).

**PANNA statement**

Pesticide Action Network North America supports use of pheromone mating disruption technologies to control Light Brown Apple Moth (LBAM). Our support is based on the fact that the technology and associated products have been approved by the National Organic Program for use in LBAM control. Pheromones are among the least hazardous of remedies and their use is far preferable to the use of hazardous synthetic chemical pesticides. (The pheromone is not itself a pesticide -- it does not actually kill or even harm the moth. It confuses male moths seeking mates; by disrupting the moths' mate-finding ability, it reduces their reproduction and thus ultimately moth population levels).

We encourage least invasive methods of application of these organic remedies, such as traps, twist-ties (Isomate LBAM Plus) and localized ground-level spraying of the organic insecticide, Bacillus thuringensis (Bt). Note: Twist ties are sometimes used after initial localized ground spraying with Bt. Most counties on CDFA's website have response plans that rely on these less-invasive methods (e.g. Vallejo, Sherman Oaks, San Jose, Dublin, Danville, Napa and Oakley).

PANNA has joined organic and conventional growers in supporting the pheromone application as a safer alternative approach. We understand that some community

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members are concerned about aerial spraying, as is PANNA, because even if the toxic hazards of a product are extremely low, being sprayed is unpleasant. PANNA also does not believe that eradication of this moth or other pests is a realistic pest management approach. Sustainable, least-toxic ecological IPM (Integrated Pest Management) is the appropriate response. We encourage CDFG to continue focusing on least-toxic approaches and to work with IPM experts and community members in developing a long-term sustainable pest management plan for LBAM.

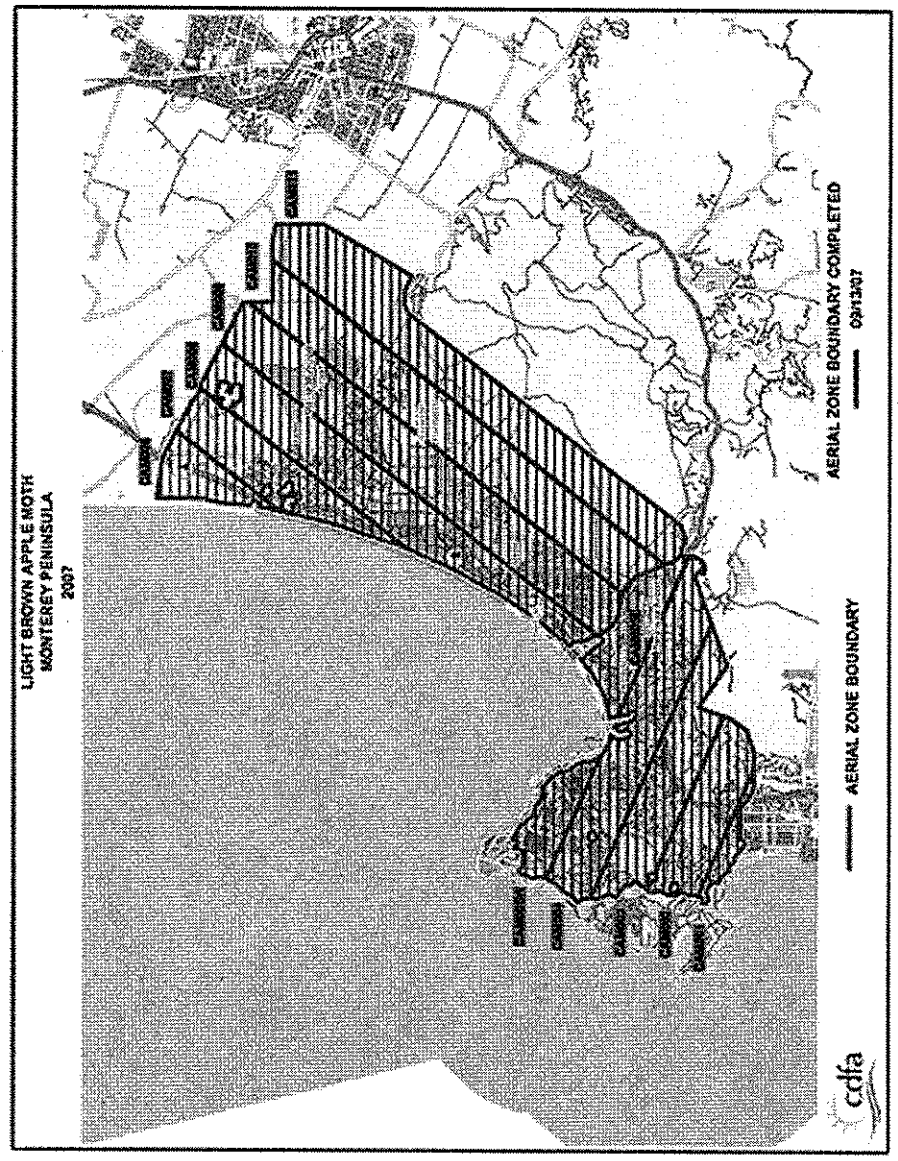
**Action and more information**

For more background on pheromone mating disruption, there is a useful article from University of California, Davis, "Pheromone mating disruption offers selective management options for key pests".

If you are planning action related to the Light Brown Apple Moth, please keep PANNA informed. We'll do our best to connect you with others who are concerned, and we'll let you know if resources become available to address the problem more specifically. If you have any further questions, please e-mail Dr. Marcia Ishii-Eiteman at [mie@panna.org](mailto:mie@panna.org) or call PANNA at 415-981-1771.

**Spray Area**





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DEPARTMENT OF PARKS AND RECREATION • P.O. Box 942896 • Sacramento, CA 94296-001  
(916) 653-6887

Ruth Coleman, Director

September 12, 2007

The Honorable Assemblyman John Laird  
California State Capitol  
P.O. Box 942849  
Sacramento CA 94249-0027

Dear Assemblyman Laird 

Thank you for your inquiry for information and opinion regarding eradication of light brown apple moth (LBAM) from the Monterey Peninsula. The Department of Parks and Recreation does not employ a full time pest manager who can speak to the biochemical issues of pheromone application for eradication of LBAM. However, I can speak to the consequences of introduced forest pests. The Department is still suffering from two devastating exotic forest diseases in the Monterey area. As you are aware, pine pitch canker has caused extensive mortality in the native and planted Monterey pine stands. In the mid 1990s Sudden Oak Death was diagnosed and has become widespread up and down the coastal counties. The mortality that these two exotic diseases have caused has cost the Department over a million dollars in hazard tree removals, clean up, lost revenue in the developed areas and an increased fire danger in the wildlands.

LBAM is a generalist defoliator with a long host list including such important native conifers as coast redwood, Douglas-fir, grand fir, pine, spruce and cypress species, western red and Port Orford cedars, and native hardwoods including oaks, willows, cottonwoods, Pacific madrone, and California black walnut. It also will attack a multitude of native shrubs including rhododendrons, coyote bush, currants, roses, and sages. In the absence of its native predators and parasites, LBAM could easily explode through California forests causing yet another wave of dead trees and shrubs and the associated costs. It has become exceedingly difficult for Department staff to manage native ecosystems that are repeatedly exposed to such unprecedented disruptions.

The Department of Parks and Recreation strongly supports the efforts of the California Department of Food and Agriculture and the US Department of Agriculture to eradicate LBAM before it becomes permanently established. Weighed against the tremendous long term cost and toxic pesticide exposure that Californians will have to endure if forced to live with a permanently established population of LBAM, the risk of human injury from exposure to the target specific insect pheromones Checkmate ORL-F and Checkmate LBAM-F or localized treatments of the insect-specific, biological control bacteria Bt (*Bacillus thuringiensis*) does not appear significant.

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The Department of Parks and Recreation has extensive experience in control of exotic pest species of all types. Obviously, it is significantly less expensive and less environmentally damaging to eradicate a newly introduced pest than it is to attack a large entrenched infestation. LBAM would be particularly troublesome because of its extensive list of host trees and shrubs and because Monterey area forests are already exposed to severe disruptions from other exotic pests. If you have any questions call Stephen Bakken (916-654-9934) or Rick Rayburn (916-653-6725).

Sincerely,

A handwritten signature in cursive script that reads "Ruth Coleman". The signature is written in black ink and is positioned above the printed name and title.

Ruth Coleman  
Director