

September 8, 2009

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Dear Mr. Rains:

This letter presents comments of the City of Albany on the Draft Programmatic Environmental Impact Report (DEIR) for the Light Brown Apple Moth (LBAM) Eradication Program. This program would have significant impact on our community because Albany is located within the proposed LBAM eradication zone; our residents are therefore understandably concerned with the adequacy and validity of the EIR and the research supporting the need for and safety and potential effectiveness of the program.

Our comments are as follows:

- 1. The DEIR does not address many of the comments submitted by the law firm Earthjustice on behalf of the City of Albany and other groups during the EIR scoping process.** Our scoping comments made detailed requests regarding the following issues among others: the precise locations planned for aerial spray treatments for the moth, specifics about when and where aerial and ground treatments would be conducted in the Bay Area and the state, the full chemical formulas of any pesticides and the health and environmental impacts of chronic exposure to repeated treatments with these chemicals including impacts on sensitive populations, evaluation of the alternative of control rather than eradication for the moth, pursuit of reclassification of the moth at the federal level, and the justification of the need for the program given the lack of damage attributable to LBAM. Almost none of these comments is adequately addressed in the DEIR. The particulars related to each of the issues that we included in the scoping comments are addressed within the relevant subsections below.
- 2. The DEIR does not address the unsubstantiated assumptions on which the entire eradication program is based regarding the need for or feasibility of the program, and the destructiveness and range of LBAM and the extent to which it is established in the state.**

Need for the program

In our scoping comments, we asked that the EIR comprehensively examine the justification and need for the program given that LBAM had done no documented physical damage in the state at the time, a fact that remains true today.¹ However, the DEIR does not objectively review the basis for the program. Instead, it simply accepts the premise that LBAM is destructive without addressing the lack of evidence of damage in California, the length of time the moth has been present in the state (as demonstrated by the range over which it has been found), or that substantial scientific literature and experience with this insect in other countries which support the conclusion that LBAM is not in fact a dangerous pest and does not pose a threat to agriculture or wild land plants in California. This flaw runs throughout the EIR, which simply repeats unsubstantiated claims and assumptions made by the California Department of Food and Agriculture (CDFA) regarding the moth.

The DEIR does not address the fact that the United States Department of Agriculture (USDA) has based the program on only three scientific studies, two of them many decades old, despite the existence of a much larger scientific literature on the apple moth, which has been documented in a reclassification petition to the USDA

¹ limited damage to one berry field in Watsonville has been represented in the media as due to LBAM; however, DNA testing was not definitive regarding what species of moth larvae were present in that field, and the California Department of Food and Agriculture acknowledge in their Annual LBAM Report to the legislature for 2009 that they need better DNA testing to be able to definitively identify LBAM.

(Upton et al., 2008). The DEIR does not consider up-to-date data from New Zealand and Hawaii where the moth has been an established exotic species for a century and is not considered to be of concern (for example, Harder and Rosendale 2008, Butcher 2008). It does not consider that the full extent of the moth's range in California, currently over 23,000 square miles, which demonstrates that, according to the rate at which it is possible for even a rapidly reproducing insect to spread, LBAM must have been here for many years if not decades and (Carey 2008, 2009). Finally, the DEIR does not address the lack of evidence of damage by the moth in California.

In our scoping comments, we asked that the revised EIR evaluate a control rather than eradication alternative, which the DEIR does not do as it assumes that eradication must be the goal and therefore dismisses from consideration any control options. We ask that the revised EIR consider control as an alternative to eradication and include a scientifically credible integrated pest management (IPM) alternative, the first step of which should be monitoring to accurately characterize LBAM populations (including seasonal variation). The goals of this monitoring should be to determine how many reproductive cycles are viable in specific locations around the state, to accurately identify LBAM's geographic range, and to determine rates of natural predation and parasitization. In a scientifically valid IPM program, this information is the first step in determining whether an insect poses a problem and, if so, what would be the least intrusive and most effective means of addressing the problem. This monitoring and characterization of LBAM should take place before any treatments are applied. IPM is the approach used by most farmers, organic and conventional alike, to monitor the leaf-roller moth family to which LBAM belongs, and is the exclusive method of addressing LBAM in New Zealand where it has been naturalized for more than 100 years and where it is of concern only because of the need for exported produce to meet U.S. quarantines, not because of any physical damage to produce (Harder and Rosendale 2008).

In addition, we ask that the revised EIR examine the pursuit of reclassification of LBAM to non-quarantinable status as one of the alternatives. While the state does not have the power, by itself, to reclassify LBAM, a legitimate effort by CDFA to assemble data in support of reclassification and to pursue reclassification at the federal level is a viable and perhaps the most supportable course of action on behalf of California farmers as reclassification of the moth which would remove the quarantines that now punish farmers and would eliminate the requirements for dangerous and unnecessary pesticide use.

Feasibility of the program

The DEIR assumes in its analysis that the proposed treatments will eradicate LBAM and does not examine the evidence that, even if the moth were a danger, eradication is not feasible, both because of the range over which it is already established in the state and the fact that the techniques proposed simply will not work, as many scientists and experts have testified (Chambers 2009). The DEIR does not provide any scientific evidence of the effectiveness of the treatment strategies proposed, which are control techniques, not eradication techniques. There is no evidence anywhere in the world of eradication of a moth species using the types of pheromone-pesticide treatments outlined in the DEIR, which are, at best, control methods that are effective over small, uniform areas such as monocropped agricultural fields; this description does not fit the varying terrain that would be treated around the state for LBAM. In addition, a major loophole in the eradication plan – that CDFA will not treat areas in and around schools and parks – effectively ensures that 100% of moths cannot be eradicated. Moreover, there are many sensitive areas of the state where treatments cannot take place, such as around bodies of water, which will also allow moth populations to survive and continue to renew.

Because all of the analysis and conclusions of the DEIR are predicated on unexamined and apparently unsupported assumptions about the risks of LBAM, the extent and duration of its residency in California, and its place in the state's ecosystem, the analysis and conclusions are by definition invalid. We ask that the revised EIR objectively examine the evidence indicating the need or lack of need for the program and analyze the validity of the conclusions drawn from the evidence.

3. The DEIR does not adequately address human and environmental health and safety impacts of the proposed LBAM program. There are four main ways in which the DEIR falls short in this area. First, it bases its health and environmental analysis on incomplete and invalid studies that do not fully evaluate

the risks of the program. Second, it evaluates each proposed treatment method by itself even though the treatments would be used in combination in the program. Third, it does not address the full formulas of the pesticides proposed for use but instead looks only at active ingredients even though more than 80% of most pesticides is made up so-called “other” ingredients. Finally, it defines the “No program” alternative in a way that is not credible, as entailing mass pesticide use by private landowners, in excess of the chemical use proposed by the state for the moth. Significant similar environmental concerns are also not addressed.

Reliance on incomplete and invalid prior studies

The health analysis in the DEIR relies on prior state studies of the adverse health effects reported after LBAM aerial spraying in 2007 (OEHHA, et al. 2008), the deaths of seabirds immediately after aerial spraying in 2007 (DFG 2007, Jessup et al. 2009), and acute toxicology tests of only the active ingredient in the pheromone-based pesticide(s) proposed for use (A review... 2008). None of these studies adequately addresses the risks of the program. The OEHHA et al. (2008) study of the health complaints after aerial spraying dismissed 90% of the complaints filed and concluded, on the basis of the 10% that were reviewed, only that “It is not possible to determine whether or not there is a link between any of the reported symptoms and the aerial spraying.” Another study concluded that the deaths of hundreds of seabirds after the 2007 spray was due to red tide without examining whether the full formula the pesticide sprayed could cause or amplify red tide or the reports of a the alleged “red tide” substance appearing in the backyards of area residents when they hosed off their decks and other outdoor areas after the spray. A third study commissioned by the state involved a small number of very short-term toxicity tests of only the active ingredient in the pheromone-based pesticides even though short-term exposure bears no relation to what actual exposures will be from a multi-year program of regular spraying. For the EIR to simply repeat without further analysis the state’s prior selective and incomplete studies and conclusions is an abdication of the purpose of EIRs under the California Environmental Quality Act (CEQA). The revised EIR needs to clearly identify the significance of the gaps in knowledge regarding the safety of the proposed treatments and the nature of valid studies that are needed to quantify the risks of the treatments. In particular, the revised EIR needs to address the lack of studies of chronic exposure to these treatments since the DEIR specifies that the planned treatment period is regular applications of treatments (monthly in most cases) for 3-5 years.

Failure to evaluate combined effect of treatments used together

The DEIR looks individually at each of the treatment methods proposed for LBAM even though they would be used in combination in the eradication program. A legitimate health analysis would address the interacting and cumulative impacts of all the treatments as they would be combined. This gets to the question of the insufficiency of the alternatives as defined in the EIR; a valid assessment of alternatives – not just for health but for all impacts -- would look at the actual combined treatments that might be used, for example ground and aerial spray plus twist ties and SPLAT treatment. In addition, the DEIR fails to evaluate at least one obvious health risk of the aerial spray formulation proposed for use, Hercon’s Disrupt Bio-flake. The DEIR says that this pesticide is sprayed in 1/8” square polymer flakes, which fall on the ground and onto plants and are designed to slowly break down, releasing pheromone, over a month; these will certainly be eaten by animals and small children. However, the risk from ingestion is not assessed. Furthermore, the impacts of the combined treatments on other sensitive populations, such as the elderly, pregnant women, and those with chronic illness, must be assessed for the health analysis to be complete.

Failure to assess full formulas of pesticides

The health analysis in the DEIR and the studies on which it relies look only at active ingredients in the pesticides proposed for use even though the majority of these formulas, as is the case for most pesticides, are made up of so-called “other” or “inert” ingredients, which can be as dangerous as active ingredients. We know some of the inerts in the aerially sprayed pesticide in 2007 are likely responsible for some of the symptoms reported then; even the OEHHA (2008) report acknowledges that the respiratory and skin symptoms are consistent with what is known about those chemicals. The new treatments proposed involve a different (flake rather than microencapsulated) formulation of the aerial spray pesticide, ground applications of the pheromone plus the pesticide permethrin which is a neurotoxin and possible carcinogen, as well as other treatments. All of the ingredients of all of these chemical must be identified, including their concentrations, and the health effects of the full formulas evaluated for the EIR to adequately assess health and environmental impacts.

No Program alternative defined unrealistically

The DEIR defines the “No program” alternatively as entailing significant use of pesticides by private landowners to control LBAM. This is unrealistic for several reasons. First, LBAM has done no documented damage, so there is no reason for individuals to use chemicals to control it. Second, in Albany, a survey of the residents performed as part of our IPM program found that at least 60% use only organic pest management in their homes and gardens; the pesticides that the DEIR assumes would be used are not organic and thus would not be used by the majority of residents in our community. Finally, the basis for the assumption of urban pesticide use is a single unpublished report prepared by a CDFA staff person who is also listed as one of the preparers of the DEIR, Dr. Robert Dowell. This report has not been peer reviewed and is based on many assumptions that are not substantiated.

In view of the above concerns, the revised draft of the EIR must:

- address the lack of information available on which to base a complete health assessment, including the limits of and flaws in existing studies
- evaluate the health effects of the treatments used in combination, as is planned in the eradication program
- evaluate the full formula of all chemicals to be used and the specific risks from ingestion of the Bio-flake formulation
- address a true “No program” alternative which would entail no action being taken, by the state, the federal government, or private landowners or individuals

Environmental impacts

As noted above for the health impacts, the revised draft of the EIR must address the lack of information about environmental impacts, particularly to water bodies, given the mass run-off of a yellow foamy substance from yards into storm drains and Monterey Bay when it rained following LBAM treatments there. This yellow substance coated the dead seabirds found after the spray. Although the same pesticide formula is not proposed for use in the program in the future, the flake formula proposed for aerial spraying should be evaluated for its effects on water bodies, which it might contact directly because of drift (drift was found up to 3.3 miles outside the spray zone in the 2007 LBAM spray), pilot error, or runoff. Of particular concern to Albany residents are effects on drinking water reservoirs, creeks, and the San Francisco Bay from either direct application of the pesticide or run-off. The DEIR does not address impacts to water because it assumes that no treatments would take place over water. Given the impacts to water in the 2007 aerial spray – the drift noted above as well as errors that resulted in treatments in areas that were supposed to be protected from spray and resulting contamination found in water bodies (DPR 2008), impacts to surface waters cannot be dismissed. Further, although the DEIR says aerial spray would take place only in forested and agricultural areas, Albany is surrounded by forested areas -- the parks of the East Bay hills, Albany hill itself – so drift and run-off are realistic possibilities if those areas are sprayed.

4. Specific Impacts on Albany and the Bay Area

We ask that the revised EIR or a tiered site-specific EIR following from this programmatic DEIR describe precisely what treatments would be used for LBAM in Albany and the San Francisco Bay Area, how frequently and at what times of day or night, for how long. What are the potentials for drift from spraying in areas near Albany? If these questions are not addressed in the revised EIR, please delineate exactly when and how they will be addressed in a site specific EIR. Would any of the forested area of Albany Hill be aerially sprayed. What would the health and environmental impacts of these treatments be locally? We also ask that the final EIR specify what criteria will be used to assess when the eradication program would be terminated and treatments ceased.

5. Civil rights issues

One of the treatment methods evaluated in the DEIR is ground spray with the *Bacillus thuringiensis* (Bt). In view of the manner in which Bt was recently applied via ground spray in the Ojai area for the gypsy moth, we ask that the revised EIR clarify exactly what procedures would be used to carry out ground spray. Specifically, would applicators spraying Bt in Albany and the Bay Area be accompanied by law enforcement and forcibly enter private property over the objections of the landowner?

6. Conclusion

Because the analysis and conclusions of the DEIR are predicated on unexamined and apparently unsupportable assumptions about the risks of LBAM, the extent and duration of its residency in California, and its place in the state's ecosystem, the document as a whole is invalid. The revised EIR needs to both examine the scientific validity of these assumptions and the full range of evidence, not just evidence supplied by CDFA and the questions to which CDFA wishes to limit the discussion. In addition, the revised EIR needs to fully address the public comments submitted during this comment period as well as the scoping period and fully evaluate the direct, indirect, and cumulative health and environmental impacts of the program, as specified by CEQA.

Sincerely,

References

- A Review of Acute Toxicity Studies Results on the Light Brown Apple Moth Pheromone Active Ingredient and Four LBAM Pheromone Products. 2008. Nov. 3
<http://www.oehha.ca.gov/pesticides/pdf/LBAMConsensus110308.pdf>
- Butcher, Mike. Technical Manager, New Zealand Pipfruit. 2008. Letter to U.S. Rep. Jackie Speier. December 10.
- California Department of Fish and Game (DFG). 2007. Pesticide Laboratory Report. Nov. 10.
- California Department of Pesticide Regulation. 2008. ENVIRONMENTAL MONITORING RESULTS OF THE 2007 PHEROMONE AERIAL APPLICATIONS FOR THE LIGHT BROWN APPLE MOTH ERADICATION PROJECT. Sept. 16.
- Carey, James. 2008. Testimony to the California Assembly Agriculture Committee. March 12.
- Carey, James. 2009. Testimony to the California Senate Food and Agriculture Committee. August 25.
- Chambers, Derrell. USDA (retired). 2009. Testimony to the California Senate Food and Agriculture Committee. August 25.
- Jessup, D. et al. 2009. "Mass Stranding of Marine Birds Caused by Surfactant-Producing Red Tide." *PlosOne*. Feb.
- Office of Environmental Health Hazard Assessment, Department of Pesticide Regulation, California Department of Public Health. 2008. *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*. April 10.
- Upton, Roy et al. 2008. *Light Brown Apple Moth (LBAM) Eradication Program: Formal Petition to Reclassify LBAM As a Non-actionable Pest. Submission to the California Department of Agriculture (CDFA) and United States Department of Agriculture (USDA)*. Sept. 12.