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CALIFORNIANS FOR PESTICIDE REFORM; PESTICIDE
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SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SACRAMENTO

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26
27 OUR CHILDREN'S EARTH FOUNDATION;
MOTHERS OF MARIN AGAINST THE
SPRAY; STOP THE SPRAY EAST BAY;
28 CITY OF ALBANY; CITY OF BERKELEY;

No. 34-2010-80000638

(Related Case: No. 34-2010-80000518)

1 CITY OF RICHMOND; CITY AND COUNTY
2 OF SAN FRANCISCO; CENTER FOR
3 ENVIRONMENTAL HEALTH;
4 CALIFORNIANS FOR PESTICIDE REFORM;
5 PESTICIDE WATCH; PESTICIDE ACTION
6 NETWORK NORTH AMERICA; CITIZENS
7 FOR EAST SHORE PARKS; STOP THE
8 SPRAY SAN FRANCISCO,

Petitioners and Plaintiffs,

v.

9 CALIFORNIA DEPARTMENT OF FOOD
10 AND AGRICULTURE; A.G. KAWAMURA, in
11 his official capacity as Secretary of the
12 California Department of Food and Agriculture;
13 and DOES 1 through 100, inclusive,

Respondents and Defendants.

**PETITIONERS' OPENING BRIEF IN
SUPPORT OF PETITION FOR WRIT OF
MANDATE UNDER CEQA**

Date: May 11, 2012
Time: 10:30 a.m.
Dept: 33

ASSIGNED FOR ALL PURPOSES
TO THE HONORABLE LLOYD G.
CONNELLY, DEPARTMENT 33

13 Our Children's Earth Foundation, Mothers of Marin Against the Spray, Stop the Spray
14 East Bay, City of Albany, City of Berkeley, City of Richmond, City and County of San
15 Francisco, Center for Environmental Health, Californians for Pesticide Reform, Pesticide Watch,
16 Pesticide Action Network North America, Citizens for East Shore Parks, and Stop the Spray San
17 Francisco (collectively, "Petitioners") respectfully submit this opening brief in support of their
18 Petition under the California Environmental Quality Act ("CEQA") filed on April 22, 2010
19 ("Petition").

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1 **I. INTRODUCTION**

2 The California Department of Food & Agriculture (“CDFA”) intends to wage a statewide
3 war against the Light Brown Apple Moth (“LBAM”) by spraying pesticides to kill LBAM,
4 widely distributing synthetic moth pheromones to confuse LBAM mating, releasing millions of
5 parasitic wasps to destroy LBAM eggs, releasing millions of irradiated sterile moths from
6 airplanes to prevent LBAM reproduction, and luring moths into toxic pesticides using LBAM
7 pheromones. CDFA’s aggressive attack is misguided, because this small Australian-native moth
8 has been in California for thirty years (if not longer), causes little damage to plants (if any), and is
9 readily controlled by natural predators, parasites, and integrated pest management techniques.

10 CDFA began its offensive in 2007, by aerially spraying synthetic moth pheromones and
11 unknown chemical additives over portions of Santa Cruz and Monterey counties. Remarkably,
12 CDFA aerially sprayed these populated areas without conducting the environmental review
13 required by the California Environmental Quality Act (“CEQA”).

14 Having since been ordered by two courts to comply with CEQA’s mandate before
15 pursuing chemical warfare against LBAM, CDFA has prepared what it calls a programmatic
16 environmental impact report (“PEIR”) for the “Light Brown Apple Moth Eradication Program”
17 (“Program”). In doing so, CDFA misled the public and thwarted the opportunity for meaningful
18 review of its battle against LBAM. The PEIR only considers a program to *eradicate* LBAM.
19 CDFA insisted that LBAM eradication was feasible and dismissed many comments questioning
20 this conclusion. CDFA also dismissed many alternatives proposed by the public that would
21 control, rather than eradicate, LBAM. But, after circulating the Final EIR, CDFA abruptly
22 reversed course, announced that eradication was not feasible, refused to reconsider any dismissed
23 control alternatives, and certified the PEIR without updating its environmental analysis to reflect
24 the new Program objective or allowing additional public comment. In a classic bait and switch,
25 CDFA presented one program to the public but approved a significantly different program after
26 the public review period had ended.

27 CDFA neglected to abide by CEQA’s requirements in many other ways as well. For
28 example, CDFA omits any environmental analysis regarding the specific places where the

1 chemicals, pheromones, wasps, and irradiated moths will be launched, instead relying on the title
2 “programmatic EIR.” But a programmatic EIR requires subsequent, more detailed site-specific
3 analysis, and CDFA has made it clear that it intends to do no further environmental review before
4 deploying the various chemicals, pheromones, wasps, and irradiated moths anywhere in the
5 nearly statewide Program “area.” The PEIR is also invalid because the alternatives analysis is
6 misleading and contains many flaws, including baseless (and ridiculous) assumptions regarding
7 private party pesticide use absent the Program. CDFA failed to analyze the chronic effects on
8 humans, or the effects on native insects and animals, of the synthetic LBAM pheromones and
9 pesticides it will use. And, CDFA did not even try to consider the cumulative impacts of the
10 Program with other projects that utilize similar chemicals and pheromones.

11 Further, the Administrative Record demonstrates that CDFA not only ignored comments
12 from the public and other agencies regarding the deficiencies in the PEIR, but CDFA also
13 dismissed comments and serious concerns raised by its own environmental consultants.
14 The Record reveals that the analysis CDFA presents in the PEIR is entirely ends-oriented;
15 multiple documents include blatant admissions by CDFA’s consultants regarding manipulation of
16 risk assessments to arrive at “no significant impact” findings in the extremely compressed time
17 period that CDFA allotted for preparation of the PEIR. For all of the reasons discussed herein,
18 Petitioners respectfully request that CDFA’s defective PEIR be set aside.

19 **II. STATEMENT OF FACTS**

20 **A. The Light Brown Apple Moth**

21 LBAM is a small lepidopteran moth native to Australia. (AR67541.)¹ LBAM also has
22 lived in New Zealand and Hawaii since at least 1891 and 1896, respectively. (*Id.*; AR02082)
23 LBAM is a “leafroller” and, like other leafroller moths, LBAM caterpillars create protective
24 shelters around themselves by rolling leaves around their bodies. (AR67543; AR60905.) LBAM
25 larvae rely on the structural integrity of these leaf cocoons for protection, and as a result the
26 larvae generally do not defoliate plants and cause only superficial leaf damage. (AR60905.)
27 Adult LBAM do not feed and cause no plant damage. (AR42921.)

28 ¹ All references to the certified Administrative Record (“AR”) are cited as: AR[bates number].

1 LBAM do not reproduce at a rapid rate. (AR60905.) While a female typically lays about
2 150 eggs during its one to two week lifespan, most eggs are eaten by predators or infested by
3 parasites and never reach maturity. (*Id.*) LBAM also do not travel great distances; adult LBAM
4 generally do not travel more than 100 meters from the plant on which they hatched. (AR60905.)
5 LBAM populations therefore grow and spread geographically at a slow rate. (*Id.*; AR02169.)

6 LBAM is considered to be a pest primarily as a result of New Zealand's experience in the
7 1980s and 1990s. (AR60907.) During this time, New Zealand farmers used organophosphate
8 insecticides² against LBAM and other insects. (*Id.*) LBAM quickly developed resistance to these
9 pesticides, and the pesticides had the unintended effect of killing many natural LBAM predators.
10 (AR67546.) As a result of heavy and widespread use of organophosphates, LBAM populations
11 expanded, and LBAM caused significant damage to some New Zealand crops. (*Id.*) Beginning
12 in the late 1990s, however, New Zealand farmers halted the use of organophosphates and instead
13 adopted an integrated pest management ("IPM") approach. (AR60909.) The IPM program used
14 beneficial predators and targeted applications of less-toxic pesticides to control LBAM
15 populations. (AR67546.) Without organophosphates, the natural balance of LBAM and its
16 predators was restored and LBAM numbers remained low. (*Id.*) LBAM now causes little crop
17 damage there and is not considered a significant agricultural pest. (AR60908.)

18 In many respects, California and New Zealand are similar – they have similar climates and
19 grow similar crops. (AR67541; AR60903-04.) California also has native populations of
20 leafroller moths and their natural predators. (AR60911-12.) Because of these similarities, a
21 biological control or IPM program modeled after New Zealand's could effectively control LBAM
22 in California. (AR60913; AR67547-48.) An expert recently noted that, "[m]any fruit crops in
23 California already receive control measures for native and introduced leafrollers, and these tactics
24 may prove to be effective for [LBAM] without a great deal of modification." (AR67548.)

25 B. CDFAs "Emergency" Aerial Spraying Of LBAM Pesticides

26 In late 2007, CDFAs began what it called an "emergency" effort to eradicate LBAM.

27
28 ² Organophosphate pesticides act by disrupting nerve function of insects and are highly toxic to nearly all insects, as well as humans and many other animals. (AR60907.)

1 Although many experts believe LBAM has been living in California for up to 30 years, CDFA
2 claimed LBAM had only recently entered California after a retired entomologist found LBAM in
3 his backyard in Berkeley in 2006. (AR00068.) Deeming this so-called discovery an emergency,
4 CDFA sprayed untested LBAM pheromones over Santa Cruz and Monterey counties using crop
5 duster airplanes, all without conducting any environmental review. (*Id.*) Shocked residents and
6 concerned citizens immediately filed two CEQA lawsuits challenging CDFA's aerial spraying.
7 (AR60915.) CDFA argued that the spraying was a necessary emergency measure exempt from
8 CEQA and, in any case, unlikely to have any significant environmental effects. Two courts
9 disagreed with CDFA, granting motions for preliminary injunction and ordering CDFA to prepare
10 an EIR before conducting any further aerial spraying of LBAM treatments. (*Id.*)

11 After the spraying, many Santa Cruz and Monterey residents complained of adverse
12 effects, including shortness of breath, dizziness, headache, nausea, and vomiting. (AR61268.)
13 Residents also experienced psychological trauma from being aurally sprayed with untested,
14 synthetic moth pheromones and other chemicals without their consent. (AR06979-89.) And the
15 adverse effects were not confined to humans; residents also reported a large number of dead sea
16 birds floating in coastal waters. (AR08571; AR01775.) After investigating the sea bird deaths,
17 the California Department of Fish and Game admitted it could not say definitively that the
18 spraying did not cause the deaths. (AR08571.) CDFA has itself admitted that the effects of
19 LBAM pheromones on animals and humans are not well understood. (AR01207-08.) In
20 particular, the effect of chronic exposure to the pheromones is unknown. (AR00384; AR01209.)

21 C. The Draft EIR For LBAM Eradication Using Eight Treatments

22 Under court order to prepare an EIR, CDFA devised a "program" to continue its attack on
23 LBAM. CDFA defined the goal of its program as the "eradication" of LBAM from California.
24 (AR00163.) It defined the program area as "all portions of the state [of California] in which
25 climatic conditions are suitable to the LBAM" (the "Program Area"). (*Id.*) According to CDFA,
26 this includes the entire state except a few desert and mountain areas. (*Id.*) CDFA provided
27 nothing adequate to show where in the vast Program Area eradication activities will occur. (*Id.*)
28

1 CDFA does not dispute that it has not analyzed the impacts of its eradication activities in
2 the specific environments where the activities will occur. (*See, e.g.*, AR00486; AR00456-57;
3 AR00275.) Instead, CDFA merely labeled its Draft EIR “programmatic,” describing it as a
4 “screening level” document that did not undertake “site-specific” analyses of the Program’s
5 environmental impacts. (AR00068; *see, e.g.*, AR00251; AR00486.)

6 To achieve its eradication goal, CDFA proposed eight treatment options (confusingly
7 labeled as “alternatives”). According to CDFA, it would take “3 to 5 years” to eradicate LBAM
8 using these treatment options. (AR00163.) Based on this assumption, CDFA purported to study
9 the effects of these treatments on the environment for a seven-year period. (AR01257;
10 AR01788.) The eight treatment options proposed in the Draft EIR include:

- 11 • **MD-1 (“IsoMate Twist Ties”)**: involves deploying plastic twist ties infused with the
12 synthetic LBAM pheromone³ IsoMate. (AR00170.) Each twist tie contains the active
13 ingredient pheromone in a porous plastic matrix designed to release the pheromone
14 slowly. (AR00543.) IsoMate does not kill LBAM, rather it attracts male LBAM to the
15 pheromone lure, thus reducing the probability that the male will find a mate. (AR01140.)
16 CDFA proposes deploying roughly 250 twist ties per acre in a 200-meter radius around
17 each detected LBAM population. (AR00170.) The areas where CDFA may deploy twist
18 ties include private property and residential areas. (AR01754.)
- 19 • **MD-2 (“Hercon/SPLAT Ground Spray”)**: consists of spraying the synthetic LBAM
20 pheromone mixtures Hercon Bio-Flake (“Hercon”) and “SPLAT”⁴ from guns in trucks or
21 backpacks. (AR00170.) Hercon consists of a synthetic LBAM pheromone embedded in a
22 plastic laminate polymer flake (CDFA later changed this use to a biodegradable polymeric
23 flake). (AR01488; AR03459.) SPLAT is a mixture of synthetic pheromone and
24 “biologically inert” materials intended to provide for slow pheromone release.
25 (AR01502.) CDFA proposes spraying Hercon and SPLAT on trees and shrubs in
26 residential yards and on telephone poles and trees on public property alongside roadways.

27 ³ A pheromone is a chemical signal that triggers a natural response in another member of the same species.

28 ⁴ IsoMate, Hercon, and SPLAT are collectively referred to as the “Program Pheromones.”

1 (Id.) CDFA would enter private property to apply the Hercon and SPLAT to residential
2 vegetation. (AR64031.)

- 3 • **MD-3 (“Hercon/SPLAT Aerial Spray”)**: consists of spraying either Hercon or SPLAT
4 from a Beechcraft A90 plane flying at a height of 300 to 500 feet. (AR00171.) The Draft
5 EIR provided no information about the location of any aerial spraying, other than that it
6 would occur in “undeveloped” areas. (Id.) After many comments complained about this
7 lack of specificity as to the location of aerial treatments, the Final EIR contained a series
8 of maps “where aerial application of pheromones *might* occur” but also stated that
9 exclusion of an area on these maps does not guarantee that the area would not be treated
10 with Hercon/SPLAT Aerial Spray. (AR01753-66 (emphasis added).) Elsewhere, the
11 PEIR defines the treatment area for aerial applications as a 1.5-mile radius around each
12 location where an LBAM is detected. (AR00171.)
- 13 • **MMA (“SPLAT and Permethrin Spray”)**: the “male moth attractant” treatment,
14 involves using SPLAT to attract male LBAM and then the pesticide permethrin to kill the
15 moth. (AR00171.) CDFA would apply the pheromone-pesticide mixture to street trees
16 and utility poles using either a caulk gun, backpack-based gun, or truck-based gun. (Id.)
17 CDFA contemplates application of SPLAT and Permethrin Spray in residential areas
18 without regard for population density. (Id.)
- 19 • **Btk (“Btk Spray”)**: involves application of the pesticide *Bacillus thuringiensis kurstaki*
20 (“Btk”) using backpack or truck-based spray guns. (AR00173.) Btk is a bacterium that
21 contains proteins toxic to certain insects, including moths, butterflies, beetles, and flies.
22 (AR01235.) Btk Spray is slated for use anywhere CDFA concludes “heavier larval
23 populations” of LBAM exist. (AR00173.)
- 24 • **S (“Spinosad Spray”)**: involves application of the pesticide spinosad using backpack or
25 truck-based spray guns. (AR00173.) Spinosad is an insecticidal mixture derived from the
26 soil bacterium *Saccharopolyspora spinosa* that is toxic to a wide variety of insects.
27 (AR01228.) Spinosad Spray is also proposed for use wherever “heavier larval
28 populations” of LBAM exist. (AR00173.)

- 1 • **Bio-P (“Parasitic Wasp Release”)**: consists of releasing Trichogramma wasps known to
2 parasitize LBAM eggs. (AR00174.) CDFA would release roughly 1 million wasps per
3 square mile by attaching wasp pupae in host LBAM eggs to index cards, which would be
4 attached to foliage where LBAM is detected. (*Id.*) CDFA proposes Parasitic Wasp
5 Release anywhere CDFA makes “moderate to heavy LBAM detections.” (*Id.*)
- 6 • **Sterile Insect Technique / SIT (“Irradiated Moth Release”)**: involves the aerial release
7 of LBAM that have been sterilized using heavy doses of radiation. (AR00174.) CDFA
8 believes SIT will interfere with LBAM mating by causing wild LBAM to mate with
9 sterilized LBAM, rather than other viable wild moths. (*Id.*) CDFA proposes releasing at
10 least 20 million sterile moths per day at approximately 500,000 moths per square mile.
11 (*Id.*) CDFA would release the moths using a Beechcraft twin engine A90, flying at about
12 2,000 feet. (*Id.*) CDFA characterizes SIT as the “primary” eradication tool, when
13 available. (*Id.*) Irradiated Moth Release may occur anywhere in the Program Area. (*Id.*)

14 **D. Comments Identified Numerous Deficiencies In The Draft EIR**

15 In response to CDFA’s Draft EIR, numerous agencies, organizations, and individuals –
16 including Petitioners – submitted written comments and spoke at public hearings expressing
17 concerns and alerting CDFA to numerous CEQA deficiencies in the Draft EIR, some of the most
18 egregious being that the Draft EIR:

- 19 • Failed to disclose where, when, how, and in what combination CDFA would employ its
20 arsenal of Program Treatments;
- 21 • Failed to consider a reasonable range of alternatives or to consider feasible alternatives in
22 sufficient detail;
- 23 • Failed to consider the cumulative impacts of the Program with other related past, present,
24 and future projects;
- 25 • Failed to adequately analyze the Program’s impacts on human health and ecological
26 health because CDFA’s analyses were insufficient and flawed;
- 27 • Failed to disclose the inert ingredients of the Program Chemicals; and
- 28 • Improperly assumed that eradication of LBAM was necessary or feasible (tellingly, to
date, there is no reasonable or credible evidence that LBAM has caused damage to crops
in California or that eradication of the moth is possible).

(See AR01798-3449.)

1 Most of the comments fell on deaf ears, and, on February 26, 2010, CDFA released the
2 final LBAM Program EIR (“Final EIR”) that consisted of cursory responses to public comments
3 and some immaterial revisions to the Draft EIR. (AR01725-3517.) In the Final EIR, CDFA
4 approved statewide use of IsoMate Twist Ties, Hercon/SPLAT Ground Spray, Hercon/SPLAT
5 Aerial Spray, SPLAT and Permethrin Spray, Btk Spray, Spinosad Spray, Parasitic Wasp Release,
6 and Irradiated Moth Release (collectively referred to as the “Program Treatments”).⁵

7 **E. CDFA Admits Some Errors (But Ignores Many Others) In The Final EIR**

8 Two changes CDFA made in the Final EIR highlight the uncertainties surrounding the use
9 of the Program Chemicals among human populations and call into question CDFA’s assertion
10 that “[t]he safety of the biological and chemical pesticides proposed for use in the LBAM
11 Eradication Program was evaluated in the [human health risk assessment].” (AR01771.) First,
12 CDFA admitted it had miscalculated the risk to children from permethrin by using an inaccurate
13 cancer risk factor. (AR01747.) When CDFA applied the correct risk factor, the permethrin
14 exposure from SPLAT and Permethrin Spray exceeded acceptable risk levels for children. (*Id.*)
15 Thus, in the Final EIR, CDFA conceded that it had “withdrawn the Male Moth Attractant
16 Alternative from the list of potential tools to be used in the LBAM eradication Program.” (*Id.*)

17 CDFA also revised the Program Treatments to preclude application of IsoMate, Hercon,
18 or SPLAT at schools. (AR01748.) CDFA had concluded that these Program Pheromones posed
19 no threat to humans based on its flawed and conclusory analysis. But, after releasing the Draft
20 EIR, CDFA realized that the Department of Pesticide Regulation listed the Program Pheromones
21 on its *List of Pesticide Products Prohibited from Use in Schools and Child Care Facilities*. (*Id.*)
22 As a result, CDFA had to change its Program to exclude these chemicals from use near children.

23 **F. CDFA’s Radical Change On The Day It Certified The Program EIR**

24 After issuing the Final EIR, CDFA made a dramatic and sweeping change to the Program
25 in its findings of fact (“Findings”) – CDFA changed the Program goal from “eradication” to
26 “control and suppression” of LBAM. (AR00010-11.) With this momentous last-minute change,
27 CDFA certified the operative document for the Program (the “PEIR”) and issued its Findings on

28 ⁵ IsoMate, Hercon, SPLAT, Btk, and spinosad are collectively referred to as the “Program Chemicals.”

