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**Aerial Pest Eradication in Massachusetts and  
California and the Pesticide Malathion**

by

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# AERIAL PEST ERADICATION IN MASSACHUSETTS AND CALIFORNIA AND THE PESTICIDE MALATHION

Sean A. Murphy\*

## I. INTRODUCTION

On August 27, 28, and 29, 1990, Massachusetts officials initiated an aerial spraying program to apply the pesticide malathion over 700 thousand acres of the commonwealth's southeastern coast.<sup>1</sup> During the three-day period, pilots flying DC-3 aircrafts sprayed both public and private property with 14 thousand pounds of the toxic pesticide.<sup>2</sup> The aim of this massive spraying program was to reduce the threat to Massachusetts residents of an outbreak of eastern equine encephalitis (EEE), a rare but often fatal virus that attacks the brain and spinal cord when transmitted to humans.<sup>3</sup> Although the EEE virus usually is confined to birds and non-human-biting mosquitos, certain types of mosquitos occasionally spread the virus to horses and people.<sup>4</sup>

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\* Topics Editor, 1991-1992, BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW.

<sup>1</sup> Priscilla Chapman, *Malathion from the Skies*, NEW ENGLAND SIERRAN, Oct. 1990, at 9, col. 1.

<sup>2</sup> *Id.*

<sup>3</sup> Memorandum from John DeVillars, Secretary, Executive Office of Environmental Affairs (EOEA) to Michael Dukakis, Governor of Massachusetts 1 (Aug. 15, 1990) (proposed plan of action on EEE) (on file with author). The following month, a 75-year old Massachusetts man died as a result of the EEE virus. Jordana Hart, *Man, 75, With Virus Dies; Boy Is Released*, BOSTON GLOBE, Sept. 16, 1990, § Metro/Region, at 30.

<sup>4</sup> Memorandum from John DeVillars, *supra* note 3, at 1. The Massachusetts Department of Public Health (DPH) gauges the likelihood of an EEE outbreak by reviewing three factors: positive tests for the EEE virus in the mosquito species *Culiseta melanura*, prevalence of *Culiseta melanura*, and heavy rainfall. *Id.* at 1-2. The DPH found all three factors to be at significantly above average levels during the summer of 1990. Letter from Van Dunn, Deputy Commissioner, DPH to Ken Schwartz, Assistant Secretary, Executive Office of Human Services (EOHS) 2 (appraisal of public health emergency due to risk of EEE) (on file with author).

Although the aerial application of malathion was largely successful in reducing the number of mosquitos in southeastern Massachusetts, many unintended side-effects also resulted from the spraying program. Area hospitals treated at least nine people as a result of malathion exposure,<sup>5</sup> and as many as one million fish may have died as a result of malathion poisoning.<sup>6</sup> Further, although it is difficult to count the number of nontargeted organisms killed accidentally as a result of the spraying program, tests have proven that malathion is extremely toxic to the natural predators of mosquitos.<sup>7</sup>

In 1990, the state of California similarly resorted to repeated applications of malathion from helicopters over portions of southern California to combat the threat that the Mediterranean fruit fly, or "medfly", posed to crops.<sup>8</sup> Responding to what the state claimed to be a \$200-million threat to the agricultural industry within its borders,<sup>9</sup> state officials conducted an aggressive campaign that involved a workforce of 487 workers, 47 thousand gallons of malathion, and a price tag of about \$36 million to eradicate the medfly.<sup>10</sup>

California officials claimed victory over the medfly at the end of the year,<sup>11</sup> but some of the opponents to the spraying claimed that total eradication of the medfly from southern California was impossible.<sup>12</sup> Opponents pointed to the fact that similar malathion spraying programs designed to "eradicate" the medfly had occurred in southern California in 1980, 1981, 1982, 1987, 1988, and 1989.<sup>13</sup> Additionally, southern California communities and residents grew increas-

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<sup>5</sup> Laura Brown & Nick Tate, *Spraying Illness Reported*, BOSTON HERALD, Aug. 30, 1990, at 9, col. 1.

<sup>6</sup> James L. Franklin, *Tests Reported to Show Malathion Fish Kills*, BOSTON GLOBE, Sept. 8, 1990, at 49. John Healey, town administrator and health officer in Middleborough, Massachusetts, one of the communities in the spray area, reported that the spraying over the estuary of the Agawam River caused one million killifish—minnows that eat mosquito larvae—to perish. *Id.*

<sup>7</sup> Chapman, *supra* note 1, at 9; see also U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), PESTICIDE FACT SHEET NO. 152, at 4 (Mar. 1988) [hereinafter PESTICIDE FACT SHEET]. EPA data shows that malathion is "potentially highly toxic to aquatic invertebrates, bees, and aquatic life stages of amphibians; moderately toxic to birds; and slightly toxic to fish." PESTICIDE FACT SHEET, *supra*, at 4.

<sup>8</sup> Maura Dolan, *Scientists Grow Skeptical About Eradicating Medfly*, L.A. TIMES, Jan. 11, 1990, at A1, col. 5.

<sup>9</sup> See *Talevich v. Voss*, 734 F. Supp. 425, 428 (C.D. Cal. 1990).

<sup>10</sup> See Ashley Dunn, *Officials Wary as Spraying Ends*, L.A. TIMES, June 14, 1990, at A3, col. 1, A39, col. 1.

<sup>11</sup> Ashley Dunn, *Victory Declared Against Medflies*, L.A. TIMES, Nov. 9, 1990, at B1, col. 2, B4, col. 1.

<sup>12</sup> Dolan, *supra* note 8, at A1.

<sup>13</sup> *Id.* at A22, col. 1.

ingly concerned during the course of the 1990 eradication campaign about the wisdom of the aerial sprayings.<sup>14</sup> In fact, public irritation with the continued helicopter sprayings became so great that one community in southern California, Pasadena, passed an ordinance banning low-flying aircraft, such as the state's spray helicopters, from flying in its airspace.<sup>15</sup>

While Massachusetts's and California's spraying programs had different motivations, officials in both states failed adequately to consider the long-term effects on human health and the environment that would result from wide-scale aerial spraying of malathion. Moreover, despite the existence of environmental statutes in both California<sup>16</sup> and Massachusetts<sup>17</sup> requiring state officials to prepare environmental impact analyses of the long-term effects of state actions, the two states circumvented these statutes in favor of immediate aerial spraying prior to any such environmental analysis. Citizens in both California<sup>18</sup> and Massachusetts<sup>19</sup> have attempted to use the judicial system to halt such spraying in recent years, but state courts have failed to find a violation of any constitutionally cognizable interest.<sup>20</sup>

Because it is unlikely that the state courts in California and Massachusetts will find a violation of a constitutional interest to prevent future spraying programs, state legislatures should amend state law to ensure that states adequately consider the long-term effects of their actions on human health and the environment. Such amendments should include both provisions for greater coordination among state agencies in addressing public health and agricultural threats and greater public participation in the process of addressing such

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<sup>14</sup> Ashley Dunn, *Malathion Foes Begin to Swarm*, L.A. TIMES, Jan. 27, 1990, at A1, col. 1. A number of protest groups formed to stop the spraying, including Safe Alternatives to Fruit Fly Eradication (SAFE); Citizens Against Urban Spraying (CAUS); Residents Against Spraying Pesticide (RASP); Coalition Against Malathion; and Garden Grove Residents Against Malathion Spraying (GGRAMS). *Id.* at A30, col. 1.

<sup>15</sup> Ashley Dunn & Vicki Torres, *Malathion Dogfight Ends with Scarcely a Whimper*, L.A. TIMES, Feb. 23, 1990, at A1, col. 5. As a result of the ordinance's passage, one of Pasadena's police helicopters actually attempted to ward off six of the helicopters that the state had hired to spray malathion. *Id.*

<sup>16</sup> CAL. PUB. RES. CODE §§ 21000-21194 (West 1986 & Supp. 1991).

<sup>17</sup> MASS. GEN. L. ch. 30, §§ 61-62H (1979 & Supp. 1990).

<sup>18</sup> See *Talevich v. Voss*, 734 F. Supp. 425, 427 (C.D. Cal. 1990).

<sup>19</sup> See *Dubois v. Johnston*, No. 90-1736A (Plymouth Superior Ct. Mass. filed Aug. 24, 1990).

<sup>20</sup> See *Talevich*, 734 F. Supp. at 433-34. In an unpublished oral decision, the Massachusetts Superior Court in *Dubois* denied the plaintiffs' motion for an injunction to prevent the spraying. See James L. Franklin, *Encephalitis Case Confirmed; Judge Refuses to Halt Spraying*, BOSTON GLOBE, Aug. 28, 1990, § Metro/Region, at 1, col. 1.

threats, and requirements that public officials adhere to existing environmental statutes mandating the analysis of long-term effects of state action on human health and the environment.

Section II of this Comment discusses malathion's possible effects on human health and the environment. It also examines the federal statutes that govern the use of pesticides. Section III then discusses Massachusetts's statutory scheme governing pest eradication and the measures that the commonwealth has taken to combat mosquito populations. In section IV, this Comment describes both California's statutory scheme governing pest eradication and its pest eradication efforts to date. Section V examines past judicial challenges to pest control programs in California and the standard of judicial review that California courts have applied. Section VI discusses the possibility of stricter judicial review in future judicial challenges. Finally, Sections VII and VIII propose and analyze alternatives to the current programs in Massachusetts and California.

## II. MALATHION AND FEDERAL PESTICIDE LAW

### A. *Malathion's Effects on Humans and Wildlife*

State officials in both Massachusetts<sup>21</sup> and California<sup>22</sup> chose malathion for their spraying programs because they considered malathion's impact on humans and the environment to be less damaging than other pesticides. Malathion is a "cholinesterase inhibitor", meaning that it kills pests by inhibiting an enzyme that is vital to nerve impulses.<sup>23</sup> Although in 1980 California released a health study that concluded malathion does not pose a significant risk to humans, Marc Lappe, the study's chief author, later withdrew his support for

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<sup>21</sup> Memorandum from Van Dunn, Deputy Commissioner, DPH to Ken Schwartz, Assistant Secretary, EOHS 1-2 (Aug. 15, 1990) (human carcinogenicity of malathion) (on file with author).

<sup>22</sup> See, e.g., Dunn, *supra* note 14, at A30, col. 1. In fact, in 1981, B.T. Collins, then director of the California Conservation Corps, drank a glass of diluted malathion in an effort to show the public that malathion was harmless. *Id.*

<sup>23</sup> See PESTICIDE FACT SHEET, *supra* note 7, at 3. Because the body lacks active cholinesterase, the neurotransmitter chemical—which tells muscle cells to contract—remains in the body and causes insects to become paralyzed and die. Linda Roach Monroe & Ashley Dunn, *El Cajon Braces for Threat from the Partly Known*, L.A. TIMES, May 21, 1990, at B1, col. 2.

the study because state officials altered his findings.<sup>24</sup> Lappe now cautions that direct exposure to malathion poses a significant danger of chronic toxicity and possible genetic damage to people who are young, old, or infirmed.<sup>25</sup> He claims that although scientists are uncertain about malathion's long-term effect on human health or behavior, studies of long-term exposure to the pesticide in animals show changes in the chromosomal make-up of the blood, bone material, and brain.<sup>26</sup> Lappe also states that studies show malathion acting as a mutagen, damaging the genetic make-up of germ cells such as sperm.<sup>27</sup>

In addition to evidence that malathion may be a mutagen, there is an ongoing debate over whether malathion is a carcinogen.<sup>28</sup> After reviewing the scientific literature on the effects of malathion, cancer researcher Melvin Reuber reported in 1984 that cancerous growths on the endocrine organs, brain, and liver, as well as ulcers, chronic renal disease and atrophy of the testes in had been found in laboratory rats.<sup>29</sup> In 1990, however, the United States Environmental Protection Agency (EPA) stated that there is no "clear-cut" evidence of carcinogenicity associated with malathion.<sup>30</sup> While the EPA did not classify malathion as a carcinogen, it qualified its assessment by stating that it needed more data to make a definitive determination.<sup>31</sup> Additionally, the agency decided to classify malathion as a noncar-

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<sup>24</sup> Susan Seager, *Scholar Disavows State's Use of His Malathion Study*, L.A. DAILY J., Feb. 5, 1990, at 1, col. 2. Lappe refused to sign the final 1980 report, which the state had commissioned, because it changed his findings on the cancer risk of malathion as well as certain other findings. *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* Additionally, in May 1990, a panel of health experts whom California hired to review scientific information on malathion reported that early evidence suggests malathion causes genetic damage in laboratory cell cultures, animals, and humans. Monroe & Dunn, *supra* note 23, at B1, col. 2.

<sup>27</sup> Seager, *supra* note 24, at 1, col. 2.

<sup>28</sup> See, e.g., James Quinn, *State Panel Says Malathion No Serious Health Threat*, L.A. TIMES, Aug. 16, 1990, at A1, col. 5, A32, col. 2.

<sup>29</sup> Peter Green, *Commentary; Malathion Options Need Be Found*, L.A. TIMES, Jan. 28, 1990, at B10, col. 3. Reuber also reported that, "in tests taken to date, it has been demonstrated that virtually every chemical which has been found to be carcinogenic in humans is also carcinogenic in one or more mammalian test animals." *Id.*

<sup>30</sup> "No Clear-Cut Evidence of Carcinogenicity" for Malathion, EPA Says, PESTICIDE & TOXIC CHEM. NEWS, Feb. 14, 1990, at 32.

<sup>31</sup> *Id.* The EPA fact sheet on malathion concludes that only three of five cancer studies using rats and mice are scientifically sufficient as showing no evidence of carcinogenicity. PESTICIDE FACT SHEET, *supra* note 7, at 4. The fact sheet also concludes that studies of birth defects in rodents were largely unacceptable. *Id.*

cinogen despite the fact that an EPA peer review group presented strong minority recommendations that malathion be classified as a "possible" carcinogen.<sup>32</sup>

Since its introduction to the United States pesticide market, malathion has been linked with numerous human poisonings.<sup>33</sup> For instance, the EPA's pesticide incident monitoring system reported 962 incidents of human poisoning from malathion between 1960 and 1980.<sup>34</sup> In California, where reports of occupational pesticide poisonings are mandatory, malathion was the third most common cause of pesticide illness between 1981 and 1985.<sup>35</sup>

Although malathion is considered an effective agent in controlling the targeted medflies in California and mosquitos in Massachusetts, it also has a strong and debilitating effect on nontargeted species of wildlife.<sup>36</sup> In California, home gardeners in spray areas have complained that since the state initiated its spraying program, increasing numbers of parasitic insects such as aphids have devoured outdoor plants.<sup>37</sup> Aphids' natural predators—ladybugs, lacewings, and tiny wasps—no longer can keep the aphid population in check because malathion poisoning has killed them off in large numbers.<sup>38</sup> Studies confirm the complaints from California gardeners that malathion is poisonous to "good bugs": bugs that prey on insects such as aphids.<sup>39</sup> Moreover, studies by the Office of Endangered Species (OES) in the United States Fish and Wildlife Service indicate that certain uses of malathion may jeopardize the continued existence of endangered species or critical habitat of certain endangered species.<sup>40</sup>

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<sup>32</sup> "No Clear-Cut Evidence of Carcinogenicity" for Malathion, EPA Says, *supra* note 30, at 32.

<sup>33</sup> NATIONAL COALITION AGAINST THE MISUSE OF PESTICIDES, HEALTH CONCERNS REGARDING MALATHION SPRAYING IN SOUTHERN CALIFORNIA 1 (1988).

<sup>34</sup> *Id.* (citing OFFICE OF PESTICIDE PROGRAMS, U.S. ENVIRONMENTAL PROTECTION AGENCY, SUMMARY OF REPORTED PESTICIDE INCIDENTS INVOLVING MALATHION (1980)).

<sup>35</sup> NATIONAL COALITION AGAINST THE MISUSE OF PESTICIDES, *supra* note 33, at 1.

<sup>36</sup> See PESTICIDE FACT SHEET, *supra* note 7, at 4.

<sup>37</sup> *The Spring of Discontent*, L.A. TIMES, Apr. 22, 1990, at M6, col. 1.

<sup>38</sup> *Id.* Aphids survive the spraying because unlike their predators, which are active airborne travelers, aphids live beneath plant leaves and thus are less likely to come in contact with malathion droplets. Stephanie Chavez & Berkeley Hudson, *Aphids Attack Gardeners in Wake of Medfly Spraying*, L.A. TIMES, Apr. 19, 1990, at A1, col. 1, A30, col. 1.

<sup>39</sup> *The Spring of Discontent*, *supra* note 37, at M6, col. 1; see also PESTICIDE FACT SHEET, *supra* note 7, at 4.

<sup>40</sup> PESTICIDE FACT SHEET, *supra* note 7, at 8. As a result of the OES findings, California was forced to halt its spraying activities in one area when it learned that the area was the habitat of an endangered species of rat. Eric Lichtblau, *Rat's Territory Exempted from Spraying*, L.A. TIMES, Apr. 27, 1990, at A37, col. 1. The federal Endangered Species Act requires all federal agencies to ensure that any action authorized, funded, or carried out by

*B. The Federal Insecticide, Fungicide and Rodenticide Act*

The federal statute regulating pesticides is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).<sup>41</sup> FIFRA establishes labeling and registration requirements for pesticides used in interstate commerce and makes it a crime to use a registered pesticide in a manner inconsistent with the pesticide's labeling instructions.<sup>42</sup> The FIFRA registration process includes submittal to the EPA of the pesticide's formula, a proposed label, and a full description of the tests and results upon which the pesticide manufacturer's claims are based.<sup>43</sup> Essentially, FIFRA requires the EPA to approve a pesticide's registration if the pesticide does not have "any unreasonable adverse effects on the environment."<sup>44</sup> FIFRA mandates that the EPA take into account the economic, social, and environmental costs and benefits of the use of a pesticide when the agency determines whether that pesticide will have an unreasonable adverse effect on the environment.<sup>45</sup>

While FIFRA makes it a crime to use a registered pesticide in a manner inconsistent with the pesticide's labeling instructions, the primary focus of FIFRA is to keep harmful pesticides off the market rather than to regulate the manner in which people use them.<sup>46</sup> FIFRA allows the EPA to enter into cooperative agreements with individual states when states show that they are capable of enforcing the statute.<sup>47</sup> Once the agency reaches such an agreement with a state, the individual state, and not the EPA, has the primary authority to take enforcement actions against FIFRA violators.<sup>48</sup> Because both California<sup>49</sup> and Massachusetts<sup>50</sup> have entered into coop-

an agency will not be likely to jeopardize the continued existence of a listed species or to result in the destruction or adverse modification of the critical habitat of a listed species. 16 U.S.C. §§ 1531-1544 (1988).

<sup>41</sup> 7 U.S.C. §§ 136-136y (1988).

<sup>42</sup> *Id.* §§ 136a(a), 136a(c)(1)(D), 136j(a)(2)(G), 136l. For example, such labeling instructions include the recommended concentration of the pesticide, the method of application, and the type of terrain on which the pesticide is to be used. *Id.* § 136(ee).

<sup>43</sup> *Id.* § 136a(c)(1).

<sup>44</sup> *Id.* § 136a(c)(5).

<sup>45</sup> *Id.* § 136(bb).

<sup>46</sup> See Jeffrey D. Huffaker, *The Regulation of Pesticide Use in California*, 11 U.C. DAVIS L. REV. 273, 290 (1978).

<sup>47</sup> 7 U.S.C. § 136u(a) (1988). Once a state submits an acceptable regulatory plan to the EPA, the individual state and the EPA may enter into a cooperative agreement whereby the individual state will implement the registration and labeling requirements of FIFRA. *Id.*

<sup>48</sup> *Id.* § 136w-1 (1988).

<sup>49</sup> See CAL. FOOD & AGRIC. CODE §§ 5001-8808 (West 1986 & Supp. 1991).

<sup>50</sup> See MASS. GEN. L. ch. 132B, §§ 1-15 (Supp. 1990).

erative agreements with the EPA to enforce FIFRA, a malathion applicator in either California or Massachusetts who violates malathion's labeling instructions is subject to state agency enforcement actions but not EPA enforcement actions.<sup>51</sup>

### III. MASSACHUSETTS'S STATUTORY SCHEME AND PEST ERADICATION EFFORTS

#### A. *Massachusetts Statutes Governing Pest Eradication*

Massachusetts divides the responsibility for recognizing and addressing public health threats posed by mosquitos between the Department of Public Health (DPH)<sup>52</sup> and the State Reclamation and Mosquito Control Board (SRMCB), an agency that is composed of

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<sup>51</sup> 7 U.S.C. § 136w-1 (1988). Moreover, FIFRA does not have a citizen suit provision that would allow citizens to trigger an enforcement action under FIFRA. *See id.* §§ 136-136y. Although plaintiffs in California and Massachusetts failed to allege violations of other federal statutes, it is possible that the states' malathion spraying programs may have violated the Clean Water Act (CWA). *See* 33 U.S.C. §§ 1251-1387 (1988). The CWA employs two types of effluent limitations: water quality-based, *id.* § 1313, and technology-based, *id.* § 1311. The first type of limitation is based on the effect of a discharge on water quality and the second is based on the technological and economic feasibility of a particular effluent control system. *Id.* §§ 1311-1317. The application of the two standards is such that there are uniform national technology-based effluent limitations, but where these limitations are inadequate, the act imposes stricter water quality-based limitations. *Id.* §§ 1312-1313.

The CWA defines pollution as the "man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." *Id.* § 1362(19). In order to restore and maintain the chemical, physical, and biological integrity of the nation's waters, the CWA declares that "it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985." *Id.* § 1251(a)(1).

Toward that end, Congress established in the CWA the National Pollutant Discharge Elimination System (NPDES), which requires permits for discharges of pollutants into the nation's waters. *Id.* § 1342. Under the NPDES program, it is unlawful for any person to discharge a pollutant without obtaining a permit and complying with its terms. *Id.* § 1311. The CWA defines "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source." *Id.* § 1362(12). Courts have interpreted the term "navigable waters" to include nonnavigable tributaries that flow into navigable rivers, *United States v. Ashland Oil and Transp. Co.*, 504 F.2d 1317, 1325 (6th Cir. 1974), and mosquito canals, *United States v. Holland*, 373 F. Supp. 665, 673 (M.D. Fla. 1974). Courts have also interpreted the term "point source" broadly to include equipment and machinery such as dump trucks and trailer trucks. *See, e.g.*, *United States v. Tull*, 615 F. Supp. 610, 615-18 (E.D. Va. 1983), *aff'd*, 769 F.2d 182 (4th Cir. 1985), *rev'd on other grounds*, 481 U.S. 412 (1987). Given the court's broad definition of "point source," it is likely that the airplanes involved in the malathion operation qualify as point sources. Additionally, given the court's broad definition of "navigable waters," it is also likely that a significant portion of the Massachusetts spray area would qualify as navigable waters. Thus, the Massachusetts program, which occurred without a NPDES permit, arguably violated the CWA.

<sup>52</sup> JOHN D. EDMAN & J. MARSHALL CLARK, *GENERIC ENVIRONMENTAL IMPACT REPORT ON MOSQUITO CONTROL PRACTICES IN MASSACHUSETTS* 37-38 (1987) (discussion draft).

representatives from the Department of Food and Agriculture (DFA), the Department of Environmental Protection (DEP), and the Department of Environmental Management (DEM).<sup>53</sup> Although the DPH maintains a summer mosquito surveillance program for the EEE virus in eastern Massachusetts, it is the responsibility of the SRMCB to orchestrate strategies to eliminate the threat that EEE-carrying mosquitos pose.<sup>54</sup> A provision of the Massachusetts General Laws entitled "Improvement of Low Land" has granted the SRMCB the authority to control mosquito populations.<sup>55</sup> Additionally, the Massachusetts Administrative Procedure Act (MAPA) authorizes the SRMCB to promulgate emergency regulations that govern the manner in which the SRMCB acts in emergency situations.<sup>56</sup>

Two state statutes potentially constrain the SRMCB as it carries out its responsibilities. The Massachusetts Pesticide Control Act (MPCA)<sup>57</sup> requires notice before sprayers conduct pesticide operations,<sup>58</sup> and the Massachusetts Environmental Policy Act (MEPA)<sup>59</sup> requires preparation of an environmental impact analysis prior to the undertaking of any state action that may have an adverse effect on the environment.<sup>60</sup>

## 1. Improvement of Low Land

The primary statutory authority empowering the SRMCB to control mosquitos is the Massachusetts General Laws provision entitled "Improvement of Low Land."<sup>61</sup> This provision grants the SRMCB the power to eradicate mosquitos in any infested area if such erad-

<sup>53</sup> MASS. GEN. L. ch. 252, § 2 (1988 & Supp. 1990). The SRMCB is composed of representatives from the different departments within the EOEa. *Id.* The DEP formerly was called the Department of Environmental Quality Engineering.

<sup>54</sup> See Memorandum from Philip Johnston, Secretary, EOHS, to John DeVillars, Secretary, EOEa 1 (Aug. 15, 1990) (on file with author). In his memo, Johnston urged DeVillars to take action against the mosquito threat and stated that, while DPH monitors the risk of disease posed by EEE, the legal responsibility for addressing mosquito control is within the EOEa. *Id.*

<sup>55</sup> MASS. GEN. L. ch. 252, §§ 1-14C (1988 & Supp. 1990).

<sup>56</sup> MASS. GEN. L. ch. 30A, §§ 1-17 (1979 & Supp. 1990).

<sup>57</sup> MASS. GEN. L. ch. 132B, §§ 1-15 (Supp. 1990).

<sup>58</sup> *Id.* § 11; MASS. REGS. CODE tit. 333, § 10.03(21) (1987).

<sup>59</sup> MASS. GEN. L. ch. 30, §§ 61-62H (1979 & Supp. 1990).

<sup>60</sup> Though it would seem likely that an additional constraint on SRMCB abatement activities would be the Massachusetts Wetlands Protection Act—which controls the use of freshwater and coastal wetlands through a public review and decisionmaking process that regulates activities affecting wetlands—state-sponsored mosquito control activities are specifically exempt from the provisions of this act. MASS. GEN. L. ch. 131, § 40 (1974).

<sup>61</sup> MASS. GEN. L. ch. 252, §§ 1-14C (1988 & Supp. 1990).

ication is "necessary or useful."<sup>62</sup> Significantly, however, in providing that the SRMCB or a public health official may "take action" to abate a nuisance, the SRMCB enabling statute does not provide for aerial application of pesticides over broad, populated areas.<sup>63</sup>

In order to exercise its authority to eradicate mosquitos, the SRMCB has two options. It may act pursuant to a determination that either it or a public health official makes stating that a mosquito breeding area poses a public health threat.<sup>64</sup> Alternatively, it may act pursuant to proceedings for low land improvements that will promote the "public health, safety, or convenience."<sup>65</sup>

If the SRMCB acts pursuant to a determination that mosquitos pose a public health threat, it must adhere to the following procedure, which the SRMCB enabling statute sets out. First, the commissioner of the local mosquito control district—or, in an area where the state has not formed a mosquito control district, the board of health—must determine that the particular area is infested by, or is likely to produce, mosquitos and is thus a public nuisance.<sup>66</sup> If the SRMCB or a public health official makes such a determination, the SRMCB or the official must give property owners in the infested area written notice of the presence of the nuisance along with instructions to abate the nuisance.<sup>67</sup> Only when a property owner refuses or neglects to abate the nuisance may the SRMCB or the board of health take action to abate the nuisance.<sup>68</sup> The SRMCB enabling statute does not provide, however, that the SRMCB or public health official may take action to abate a nuisance through engaging in aerial applications of pesticides over broad, populated areas.

The SRMCB enabling statute also permits a state agency to initiate public hearings to institute low land improvements if it appears that the improvements will promote the "public health, safety or

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<sup>62</sup> *Id.* § 1.

<sup>63</sup> *See id.* §§ 1–14C. Reflecting on the aerial spray program and the ambiguity of the commonwealth's authority to conduct the aerial spraying, Thomas McShane, Assistant Secretary of Environmental Affairs, stated that "[p]art of the confusion was caused by the fact that no one is statutorily authorized to do this type of thing . . ." Alexander Reid, *Decision-Making on Spray Program Questioned*, BOSTON GLOBE, Nov. 29, 1990, at 52.

<sup>64</sup> MASS. GEN. L. ch. 252, § 5B (1988 & Supp. 1990).

<sup>65</sup> *Id.* § 4A.

<sup>66</sup> *Id.* § 5B. The enabling statute permits the SRMCB to organize local mosquito control districts. *Id.* §§ 4A, 5.

<sup>67</sup> *Id.* § 5B. The SRMCB or a public health official also must give property owners suggested methods of treatment and a date by which the abatement must be complete. *Id.*

<sup>68</sup> *Id.* In order to abate a public nuisance, agents or employees of the Board of Health or of the Commissioner may enter private property. *Id.*

convenience.”<sup>69</sup> Arguably, such improvements could include measures to eradicate a public health threat posed by mosquitos. This section of the SRMCB enabling statute, however, only permits an agency to initiate a public hearing to decide whether low land improvements are necessary—it does not permit the SRMCB to make such improvements.

## 2. The Massachusetts Administrative Procedure Act

Although the SRMCB enabling statute does not specifically permit the SRMCB to conduct aerial applications of pesticides, under MAPA<sup>70</sup> the SRMCB is authorized to promulgate emergency regulations—potentially allowing an aerial spraying program—that the SRMCB could apply in an emergency situation.<sup>71</sup> MAPA generally requires that agencies comply with notice and public hearing requirements prior to adopting a regulation.<sup>72</sup> If an agency believes, however, that immediate adoption of a regulation is necessary for the preservation of the public health, safety, or general welfare, and that adherence to notice and public hearing requirements would be contrary to the public interest, the agency may waive these requirements and adopt emergency regulations.<sup>73</sup> While in a nonemergency situation the SRMCB has to follow the procedure of its enabling statute strictly, under MAPA, it conceivably could promulgate emergency regulations to authorize an aerial pesticide spraying program.<sup>74</sup>

Moreover, if the governor declares that a public health emergency exists, the DPH has the authority to take immediate emergency action to address the threat without even promulgating emergency regulations.<sup>75</sup> Such authority possibly could involve taking action through the SRMCB and temporarily waiving public notification requirements.<sup>76</sup>

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<sup>69</sup> *Id.* §§ 4A, 5. In order to conduct such a proceeding, however, the agency must follow proper notice procedures. *Id.* § 4A. Such notice includes contacting each known landowner in the affected area through registered mail at least seven days before the public hearing. *Id.* § 5.

<sup>70</sup> MASS. GEN. L. ch. 30A, §§ 1-17 (1979 & Supp. 1990).

<sup>71</sup> *Id.* § 3.

<sup>72</sup> *Id.* § 2.

<sup>73</sup> *Id.* § 3.

<sup>74</sup> *See id.*

<sup>75</sup> MASS. GEN. L. ch. 17, § 2A (1981). Pursuant to such a declaration by the governor, the DPH is empowered to address a public health threat by taking emergency action and incurring such liabilities as it deems necessary to protect the public health and prevent disease. *Id.*

<sup>76</sup> *See* MASS. REGS. CODE tit. 105, §§ 100.330, 100.333 (1988).

### 3. The Massachusetts Pesticide Control Act

In addition to the fact that the Massachusetts General Laws do not specifically provide the SRMCB with the authority to conduct aerial applications of pesticides, the regulations promulgated under MPCA contain a further restriction on the manner in which the SRMCB may apply pesticides.<sup>77</sup> The purpose of MPCA is to conform Massachusetts law with federal requirements under FIFRA regarding the registration and certification of pesticides.<sup>78</sup> Among other things, MPCA regulates restrictions on the manner in which pesticides are used in Massachusetts.<sup>79</sup> The agency primarily responsible for implementing MPCA is the DFA.<sup>80</sup>

The MPCA regulations have limited provisions for granting property owners a right of exclusion from the aerial application of pesticides.<sup>81</sup> Sprayers are not required to honor such requests for exclusion, however, if the Commissioner of Public Health has certified that the pesticide application is for the purpose of protecting the public health.<sup>82</sup> Although the pesticide regulations require a permit from the DFA for all private applications of pesticide by aircraft, they do not require a permit for those applications carried out as part of mosquito control programs that the SRMCB has approved.<sup>83</sup>

In addition, the MPCA regulations provide a list of conditions that sprayers must meet before they can apply pesticides from airplanes for nonagricultural purposes such as pest eradication.<sup>84</sup> The regulations state, however, that in the event of an emergency situation requiring immediate application of pesticides by aircraft, the DFA may waive the two- to ten-day notification provision and expedite the notification process by using public service radio and television announcements.<sup>85</sup> The statutory language of MPCA itself, however, does not provide the DFA the authority to waive notice provisions.

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<sup>77</sup> MASS. GEN. L. ch. 132B, §§ 1-15 (Supp. 1990). The MPCA regulations are codified at MASS. REGS. CODE tit. 333, § 10.03 (1987).

<sup>78</sup> MASS. REGS. CODE tit. 333, § 2.02 (1986).

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> MASS. REGS. CODE tit. 333, § 10.03(22) (1987).

<sup>82</sup> *Id.* § 10.03(22)(b).

<sup>83</sup> *Id.* § 10.03(23)(b).

<sup>84</sup> *Id.* §§ 10.03(21), (22). One significant condition is that the entity initiating the application must notify abutting landowners two to ten days before the application of the pesticide. *Id.* § 10.03(21)(a). The notification must be through a newspaper of general circulation that the municipality normally uses for legal notices and must include the following: the purpose of the control program; the general location of the control area; the control material to be used; and the anticipated date and time of the control program. *Id.*

<sup>85</sup> *Id.* § 10.03(21).

#### 4. The Massachusetts Environmental Policy Act

A potentially powerful check on state agency activities that may have an adverse affect on the environment is MEPA.<sup>86</sup> MEPA mandates that prior to conducting an activity that may have an adverse affect on the environment, state agencies must determine and evaluate the impact of that activity on the environment.<sup>87</sup> Furthermore, the statute requires that agencies use all practicable means necessary to minimize any damage to the environment resulting from the state activity.<sup>88</sup>

The MEPA regulations establish thresholds for activities that will receive MEPA review, a procedure that governmental agencies must follow, and a timetable for the MEPA review process.<sup>89</sup> If a project exceeds the review thresholds set out in the regulations and may cause significant harm to the environment, the project proponent must prepare and file an environmental notification form (ENF) with the Secretary of Environmental Affairs.<sup>90</sup> At the close of the thirty-day ENF review period, during which time the secretary receives agency and public comments, the secretary determines whether it is necessary for the project proponent to complete a more detailed environmental impact report (EIR).<sup>91</sup>

The MEPA statutory language and regulations make exceptions to the ENF and EIR requirements in emergency situations, when immediate agency action is essential to avoid or eliminate an imminent threat to the public health.<sup>92</sup> MEPA, however, also requires that in emergency situations an ENF be completed within ten days of the commencement of the project; full compliance with all MEPA regulations must follow within sixty days.<sup>93</sup> The MEPA emergency regulations further require that any emergency action taken without an ENF or an EIR be the minimum action necessary to avoid or eliminate the imminent threat to the environment.<sup>94</sup>

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<sup>86</sup> MASS. GEN. L. ch. 30, §§ 61-62H (1979 & Supp. 1990).

<sup>87</sup> *Id.* § 61.

<sup>88</sup> *Id.*

<sup>89</sup> MASS. REGS. CODE tit. 301, § 11.01:2 (1987).

<sup>90</sup> *Id.*

<sup>91</sup> *Id.* According to MEPA regulations, the purpose of an EIR is to inform project proponents, public decisionmakers, and the general public of the environmental effects of the proposed activities. *Id.* § 11.01:4.

<sup>92</sup> MASS. GEN. L. ch. 30, § 62F (1979 & Supp. 1990); MASS. REGS. CODE tit. 301, § 11.11:1 (1987).

<sup>93</sup> MASS. GEN. L. ch 30, § 62F (1979 & Supp. 1990).

<sup>94</sup> MASS. REGS. CODE tit. 301, § 11.11:2 (1987). Additionally, any EIR subsequently prepared on an emergency project must consider the desirability of taking similar action in similar circumstances in the future. *Id.*

Before Massachusetts commenced its aerial spraying program in August 1990, a group of citizens from the targeted spray area joined as plaintiffs in an effort to stop the program.<sup>95</sup> In *Dubois v. Johnston*,<sup>96</sup> the plaintiffs claimed that the then proposed malathion program violated MEPA because the agencies involved in making the decision failed to file either an ENF or an EIR.<sup>97</sup> Although the Plymouth Superior Court did not grant an injunction to stop the spraying, the lawsuit brought to light the issue of whether the commonwealth should have prepared an evaluation of the potential effects of the proposed spraying program.<sup>98</sup>

Soon after the citizens filed the *Dubois* lawsuit, the Secretary of the Executive Office of Environmental Affairs (EOEA) responded to a request from the DFA for an opinion regarding the applicability of MEPA to the proposed aerial spraying program.<sup>99</sup> In a letter dated August 27, 1990, the same day the spraying program started, an EOEA undersecretary stated that it was the secretary's opinion that the project did not meet any of the regulatory thresholds requiring the filing of an ENF.<sup>100</sup> Under MEPA, a negative determination by the EOEA secretary exempts an agency from filing an ENF.<sup>101</sup> Moreover, under Massachusetts law, the EOEA's negative determination decision is not reviewable by Massachusetts courts.<sup>102</sup> Although the EOEA determined that an ENF was not required before the spraying commenced, it did suggest that as a result of the public interest in the spraying program, the DFA might wish to prepare an ENF as soon as possible after the commonwealth completed the spraying program.<sup>103</sup> The DFA never prepared an ENF.

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<sup>95</sup> *Dubois v. Johnston*, No. 90-1736A (Plymouth Super. Ct. Mass. filed Aug. 24, 1990). The group filed their complaint pursuant to a Massachusetts statute which permits the superior court for the county in which damage to the environment is about to occur to issue a temporary restraining order in response to a complaint filed by no less than ten residents of the commonwealth. MASS. GEN. L. ch. 214, § 7A (1989 & Supp. 1991).

<sup>96</sup> No. 90-1736A (Plymouth Super. Ct. Mass. filed Aug. 24, 1990).

<sup>97</sup> *Id.*

<sup>98</sup> In an unpublished decision, the Plymouth Superior Court denied an injunction to stop the spraying. See *Seeking to Ground the Aerial Sprayers*, MASS. LAW. WEEKLY, Sept. 3, 1990, at 31 [hereinafter *Aerial Sprayers*].

<sup>99</sup> Letter from James Gomes, Undersecretary, EOEA, to Catherine Clement, General Counsel, DFA 1 (Aug. 27, 1990) (Request for Opinion, equine encephalitis) (on file with author) [hereinafter Request for Opinion].

<sup>100</sup> *Id.*

<sup>101</sup> MASS. REGS. CODE tit. 301, § 11.03 (1987).

<sup>102</sup> *Cummings v. Secretary of Executive Office of Env'tl. Affairs*, 402 Mass. 611, 612-19, 524 N.E.2d 836, 837-40 (1988).

<sup>103</sup> Request for Opinion, *supra* note 99, at 1.

*B. Massachusetts Pest Eradication Efforts*

Massachusetts's first experience in addressing the threat posed by mosquito populations carrying the EEE virus occurred in 1956, when the commonwealth sprayed approximately 150 thousand acres by aircraft with DDT, a pesticide that the EPA since has banned.<sup>104</sup> Before the summer of 1990, Massachusetts officials had initiated one other emergency control program, between 1973 and 1975, when officials sprayed nearly two million acres in eastern Massachusetts with malathion.<sup>105</sup>

Massachusetts officials suspected in April 1990 that a combination of heavy rains, an unusually large number of mosquitos, and the cyclical appearance of the EEE virus meant that humans would be at risk of contracting EEE during the summer.<sup>106</sup> Consequently, the DPH issued an advisory to local boards of health warning them of the potential risk that EEE posed.<sup>107</sup> Three months later, however, the DFA—one of the state agencies represented in the SRMCB—was still uncertain about its role in controlling the health threat and about the necessity for an immediate response to the threat posed by the mosquitos.<sup>108</sup>

Not only was the SRMCB unsure about the specific measures it should employ in addressing the EEE threat, but it also was unsure about when it was supposed to act.<sup>109</sup> For instance, in a July 16,

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<sup>104</sup> EDMAN & CLARK, *supra* note 52, at 37.

<sup>106</sup> *Id.* at 38.

<sup>106</sup> Memorandum from Ralph Timperi, Assistant Commissioner for Laboratory and Environmental Sciences, & Paul Etkind, Administrative Director, Division of Epidemiology, Bureau of Communicable Disease Control to Local Boards of Health and Mosquito Control Districts 1 (Apr. 1990) (advisory on EEE) (on file with author).

<sup>107</sup> *Id.*

<sup>108</sup> Memorandum from Mark Buffone, Entomologist, DFA to August Schumacher, Commissioner, DFA 1-2 (July 3, 1990) (strategy to address EEE threat) (on file with author). Although Mr. Buffone noted that, due to the potential consequences of the virus, "[i]t is imperative that . . . we advance a strategy to adequately address this matter at all levels," he nonetheless claimed that it was "premature to activate and/or approve any operational response without further evidence to support actions such as intensified spraying," including the decision to upscale ground spraying. *Id.* at 1. In July, Buffone wrote to the chairman of the Department of Entomology at the University of Massachusetts to ask for his advice in developing a strategy to address a potential outbreak of EEE. Letter from Mark Buffone, Entomologist, DFA to John Edman, Chairman of the Department of Entomology, University of Massachusetts 2 (July 16, 1990) (on file with author). Mr. Buffone pointed out that, although no human cases of EEE yet had been reported, a small block aerial spraying program in the specific area where EEE-carrying mosquitos had been located could be prudent. He felt that any action taken after human cases appeared might be "purely political." *Id.* at 3. This letter indicated that the DFA had not yet developed a clear program of specific action to control mosquito populations. *See id.*

<sup>109</sup> *See* Letter from Charles Costa, Chairman, SRMCB to David Mulligan, Commissioner,

1990 letter to the commissioner of the DPH, the chairman of the SRMCB noted that although his agency was responsible for mosquito control, he was uncertain about what the DPH was doing to prevent an outbreak of the EEE virus.<sup>110</sup> More specifically, he was unsure about the conditions that would constitute a public health threat and at what point the DPH would declare a public health emergency.<sup>111</sup>

Four months after DPH alerted state officials that there was an elevated risk to humans of contracting the EEE virus from mosquitos, state agencies finally started to take action.<sup>112</sup> On August 7, 1990, the DPH apprised its umbrella organization, the Executive Office of Human Services, of the impending public health emergency due to the presence of the EEE virus in Massachusetts.<sup>113</sup> Consequently, on August 15, the Department of Human Services's secretary wrote to the secretary of the EOEa to urge him to take action to reduce the threat of EEE.<sup>114</sup> On the same day, the EOEa secretary informed Massachusetts Governor Michael Dukakis of a proposal to use aircraft to spray malathion over high-risk areas in southeastern Massachusetts.<sup>115</sup> Later, on August 22, the SRMCB publicly announced a health emergency due to the unusually high number of mosquitos that were found to be carrying EEE.<sup>116</sup>

In this notice of a health emergency, the SRMCB stated that it was taking steps for the eradication of mosquitos pursuant to paragraphs eighteen and nineteen of the Massachusetts Wetlands Protection Act.<sup>117</sup> Neither provision, however, grants the SRMCB the authority to conduct aerial pesticide spraying.<sup>118</sup> While paragraph eighteen states that the Wetlands Protection Act does not apply to

DPH 1-2 (July 16, 1990) (response to DPH health advisory concerning EEE) (on file with author).

<sup>110</sup> *Id.* at 2.

<sup>111</sup> *Id.*

<sup>112</sup> See, e.g., Letter from Van Dunn, Deputy Commissioner, DPH to Ken Schwartz, Assistant Secretary, EOHS 1 (Aug. 7, 1990) (supporting request of EOEa's request for emergency funding to reduce mosquito populations) (on file with author).

<sup>113</sup> *Id.*

<sup>114</sup> Memorandum from Philip Johnston, Secretary, EOHS to John DeVillars, Secretary, EOEa 1 (Aug. 15, 1990) (on file with author). Johnston stated that it was his "understanding" that while the DPH monitors the EEE risk to humans, the "legal responsibility" for addressing mosquito control is within the EOEa. *Id.*

<sup>115</sup> Memorandum from John DeVillars, *supra* note 3, at 2.

<sup>116</sup> STATE RECLAMATION AND MOSQUITO CONTROL BOARD, NOTICE OF HEALTH EMERGENCY AND MOSQUITO ERADICATION 1 (Aug. 22, 1990).

<sup>117</sup> *Id.* The Massachusetts Wetlands Protection Act is codified at MASS. GEN. L. ch. 131, §§ 40, 40A (1974).

<sup>118</sup> MASS. GEN. L. ch. 131 § 40, paras. 18-19.

mosquito control work done under the SRMCB's enabling act,<sup>119</sup> paragraph nineteen is merely an exemption from the requirement that persons wishing to "remove, fill, dredge or alter" any wetland file a notice of intention to the conservation commission.<sup>120</sup>

On August 23, 1990, the DFA commissioner issued a declaration of emergency stating that the immediate application of pesticides by aircraft was necessary.<sup>121</sup> The declaration further stated that, as a result of the emergency, and in accordance with MPCA regulations, the DFA was waiving the two- to ten-day notice requirement and was expediting the notification process by providing the public with twenty-four-hour notification through public service radio and television announcements.<sup>122</sup> Although the DFA believed that the two-to ten-day notice to the public was "not feasible",<sup>123</sup> Governor Dukakis did not issue a declaration of a public emergency, nor were public parks and forests in southeastern Massachusetts closed.<sup>124</sup> The DPH and the EOEA stated that they did not contemplate closing campsites or parks during this emergency because "campers are best prepared to cope with mosquitos."<sup>125</sup>

On August 27, 1990, the same day that the commonwealth's aerial spraying program commenced, public health officials announced the first confirmed case of EEE.<sup>126</sup> Later that day, the judge presiding over the *Dubois* lawsuit denied the plaintiffs' request for a full temporary restraining order. He did declare, however, that the spraying had to comply with malathion's labeling instructions and could not occur on or within 400 feet of bodies of water that were more than a half an acre in size.<sup>127</sup> Nonetheless, immediately after the three-day program began, there were reports from people living in the spray area that the airplane pilots had violated both the pesticide's labeling instructions and the *Dubois* court order by spraying malathion over several bodies of water.<sup>128</sup>

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<sup>119</sup> *Id.* § 40, para. 18.

<sup>120</sup> *Id.* § 40, para. 19.

<sup>121</sup> MASSACHUSETTS DEP'T OF FOOD AND AGRICULTURE, DECLARATION OF EMERGENCY FOR AERIAL SPRAYING FOR THE CONTROL OF EASTERN ENCEPHALITIS 1 (Aug. 23, 1990).

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> Chapman, *supra* note 1, at 9.

<sup>125</sup> Statement of Secretaries DeVillars and Johnston on Eastern Equine Encephalitis 3 (undated) (press release from EOEA) (on file with author).

<sup>126</sup> See, e.g., *Encephalitis Case Confirmed; Judge Refuses to Halt Spraying*, BOSTON GLOBE, Aug. 28, 1990, at 1.

<sup>127</sup> *Aerial Sprayers*, *supra* note 98, at 31.

<sup>128</sup> See Brown & Tate, *supra* note 5, at 9, 28.

In the aftermath of the spraying, at least nine people were reported hospitalized for exposure to malathion, with one person in an intensive care facility.<sup>129</sup> Additionally, test results showed that along with scores of mosquitos, malathion killed over one million fish in southeastern Massachusetts.<sup>130</sup> While the Division of Fisheries and Wildlife estimates that the average rate of fish kills in Massachusetts is one per month, at least sixteen fish kills were reported in southeastern Massachusetts on August 27 and 28 during or shortly after the spraying.<sup>131</sup> Because one of the species involved, killifish, preys on mosquito larvae, environmentalists were concerned that the spraying would exacerbate the problem of EEE because it may result in a resurgence of larger populations of mosquitos in subsequent years.<sup>132</sup>

#### IV. CALIFORNIA'S STATUTORY SCHEME AND PEST CONTROL EFFORTS

##### *A. California Statutes Governing Pest Eradication*

##### 1. The California Food and Agriculture Code

California law grants broad statutory authority to the director of the California Department of Food and Agriculture (CDFA)<sup>133</sup> and to the state's governor<sup>134</sup> to combat pest infestations. The California Food and Agriculture Code classifies any "premises, plants, conveyances or things which are infected or infested with any pest, or premises where any pest is found" as a public nuisance.<sup>135</sup> The code permits the CDFFA to abate public nuisances<sup>136</sup> and authorizes it to designate any area within the state an "eradication area."<sup>137</sup> Moreover, the CDFFA director may take such action as he or she "thinks is necessary" to abate or control pests within the eradication area.<sup>138</sup>

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<sup>129</sup> *Id.*

<sup>130</sup> Franklin, *supra* note 6, at 49.

<sup>131</sup> Chapman, *supra* note 1, at 9.

<sup>132</sup> Franklin, *supra* note 6, at 49.

<sup>133</sup> See CAL. FOOD & AGRIC. CODE §§ 5001-8808 (West 1986 & Supp. 1991).

<sup>134</sup> See CAL. GOV'T CODE §§ 8625-8629 (West 1980 & Supp. 1991).

<sup>135</sup> CAL. FOOD & AGRIC. CODE § 5401 (West 1986 & Supp. 1991).

<sup>136</sup> *Id.*

<sup>137</sup> *Id.* § 5761.

<sup>138</sup> *Id.* § 5763.

In the past, the director repeatedly has used this authority to control pests by applying malathion from helicopters over populated areas.<sup>139</sup>

The CDFA must follow certain procedures when it initiates an eradication program. It must publish in a newspaper of general circulation a written decision describing the proposed action, including findings as to the need for the action and the statutory basis for that action.<sup>140</sup> The California Food and Agriculture Code also mandates that the CDFA use nonpesticide alternatives to the maximum extent feasible.<sup>141</sup>

The public notice that the CDFA must provide before exercising its authority varies between urban areas<sup>142</sup> and nonurban areas.<sup>143</sup> While the code directs the CDFA to provide individual notice to landowners in urban areas, the notice requirements in nonurban areas are far less stringent.<sup>144</sup> In nonurban areas, California law does not require that the CDFA give the public any notice before the decision to spray is made, and the only mandatory notice after the CDFA makes its decision is the publication of the decision in a newspaper of general circulation.<sup>145</sup> Because no mandatory time for publication is required by law, however, spraying conceivably could occur before the newspaper publication.<sup>146</sup>

## 2. The California Environmental Quality Act

Like its Massachusetts counterpart MEPA, the California Environmental Quality Act (CEQA) is designed to make state officials analyze the long-term environmental effects of state actions.<sup>147</sup> The California Supreme Court has held that an agency should prepare an EIR whenever the agency perceives some substantial evidence that the project may have a significant environmental effect, or that the action arguably will have an adverse environmental impact.<sup>148</sup>

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<sup>139</sup> See Dolan, *supra* note 8, at A1, col. 5, A22, col. 1.

<sup>140</sup> CAL. FOOD & AGRIC. CODE § 5051 (West 1990). This decision must include written fact findings about each element of the decision, including the use or nonuse of nonpesticide alternatives. *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> See *id.* §§ 5771-5780.

<sup>143</sup> See *id.* § 5051.

<sup>144</sup> *Id.*

<sup>145</sup> See *id.*

<sup>146</sup> *Id.* See generally Janet D. Robinson, *State Mandated Pesticide Application and the Due Process Rights of Organic Farmers*, 17 PAC. L.J. 1301 (1986).

<sup>147</sup> CAL. PUB. RES. CODE § 21000 (West 1986 & Supp. 1991).

<sup>148</sup> *No Oil, Inc. v. City of Los Angeles*, 13 Cal. 3d 68, 85, 118 Cal. Rptr. 34, 45 (1974).

While the CEQA regulations state that one of the statute's basic purposes is to inform governmental decisionmakers and the public about the potential environmental effects of proposed activities,<sup>149</sup> the state legislature specifically has exempted area-wide pesticide spraying programs from the EIR requirement of CEQA.<sup>150</sup> Prior to 1985, the legislature allowed all state agencies to use an abbreviated administrative process in lieu of the normal EIR process in instances when their regulatory programs required a operational plan containing information about potential environmental impacts.<sup>151</sup> Because the operational plan required under the California Food and Agriculture Code for state-mandated aerial spraying programs required such environmental information,<sup>152</sup> state officials considered aerial spraying programs to be exempt from CEQA's EIR requirement.

In 1985, however, residents from northern California attacked a state pesticide program in their area and successfully enjoined the state from conducting an aerial spraying program.<sup>153</sup> Although in *Citizens for Non-Toxic Pest Control v. California Department of Food and Agriculture*<sup>154</sup> the state argued that its actions fell within the exemption to the EIR requirement, the California Court of Appeals held that the CDFA had not met CEQA review requirements.<sup>155</sup> As a result of this decision, the state legislature passed legislation specifically exempting CDFA spraying programs from CEQA review requirements.<sup>156</sup> Although that legislation was never successfully challenged in court, the California legislature since has amended the legislation to delete any specific references to CDFA pest eradication programs by name.<sup>157</sup>

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<sup>149</sup> CAL. CODE REGS. tit. 14, § 15359 (1986).

<sup>150</sup> 1985 Cal. Legis. Serv. ch. 1284, § 4 (West) (amending CAL. PUB. RES. CODE § 21080.5 (West 1986)).

<sup>151</sup> *Id.*; see also, Daryl S. Landy, *The Constitutional Implications of Government Pesticide Spraying: The Case for Limited Judicial Intervention and an Intermediate Standard of Review*, 76 CAL. L. REV. 221, 223 (1988). An agency could submit such a plan in lieu of an EIR if the plan described the proposed activity, including alternatives to the activity and mitigation measures to minimize any significant environmental impact, and was available for a reasonable time for review and comment by other public agencies and the general public. CAL. PUB. RES. CODE § 21080.5 (West 1986 & Supp. 1991).

<sup>152</sup> See CAL. FOOD & AGRIC. CODE § 5051 (West 1986), amended by 1987 Cal. Legis. Serv. ch. 1284, § 2 (West).

<sup>153</sup> *Citizens for Non-Toxic Pest Control v. California Dep't of Food and Agric.*, 187 Cal. App. 3d 1575, 1589, 232 Cal. Rptr. 729, 736 (1986).

<sup>154</sup> 187 Cal. App. 3d 1575, 232 Cal. Rptr. 729.

<sup>155</sup> *Id.* at 1585-86, 232 Cal. Rptr. at 734.

<sup>156</sup> 1985 Cal. Legis. Serv. ch. 1282, § 4 (West) (adding subdivision (k) to CAL. PUB. RES. CODE § 21080.5).

<sup>157</sup> CAL. PUB. RES. CODE § 21080.5(k) (West 1986 & Supp. 1991). Subdivision (k) formerly

### 3. The California Emergency Services Act

The California Emergency Services Act also exempts actions by state officials from CEQA's review requirements in certain situations.<sup>158</sup> The statute permits the governor, by declaring a state of emergency, to exercise complete authority over all state agencies.<sup>159</sup> The statute also permits the governor to declare a state of emergency in an area when he or she finds the safety of persons or property to be in extreme peril as a result of plant infestation or disease,<sup>160</sup> and finds local authority inadequate to cope with the emergency.<sup>161</sup> During such an emergency, the governor has complete authority to exercise, within the emergency area, all police power vested in the state.<sup>162</sup> Furthermore, the state is not liable for any claim based on a discretionary function of a state agency acting pursuant to the Emergency Services Act.<sup>163</sup>

#### *B. California's Pest Control Efforts*

Just as it had seven times before during the previous decade, the state of California waged an aggressive campaign to control an infestation by the medfly during 1990.<sup>164</sup> The 1990 program began after the discovery on July 20, 1989, of the first of 270 medflies.<sup>165</sup> While the medfly is not a native to California, state officials claim that the medfly can infest over 200 varieties of fruit and has the potential to cause \$200 million in crop damages.<sup>166</sup> Upon a declaration of an emergency from the governor,<sup>167</sup> the CDFR organized a program to apply malathion over approximately 536 square miles in parts of five

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read: "Any program for the regulation of pesticides certified pursuant to this section . . . shall apply to the use of pesticides by any state agency acting under the authority of Divisions 4 . . . and 5 of the Food and Agricultural Code in eradicating a plant or animal pest." *Id.*

<sup>158</sup> CAL. GOV'T CODE §§ 8625-8629 (West 1980 & Supp. 1991).

<sup>159</sup> *Id.* § 8627.

<sup>160</sup> *Id.* §§ 8558-8625; *see also* CAL. CODE REGS. tit. 14, § 15359 (1986). The code defines "emergency" as a "sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services." CAL. CODE REGS. tit. 14, § 15359 (1986).

<sup>161</sup> CAL. GOV'T CODE § 8625 (West 1980 & Supp. 1991).

<sup>162</sup> *Id.* § 8627. The governor also is permitted to promulgate, issue, and enforce orders and regulations deemed necessary to address an emergency. *Id.*

<sup>163</sup> *See, e.g.,* LaBadie v. California, 208 Cal. App. 3d 1366, 1369, 256 Cal. Rptr. 604, 606 (1989); Farmers Ins. Exch. v. California, 175 Cal. App. 3d 494, 501, 221 Cal Rptr. 225, 229 (1985).

<sup>164</sup> Dolan, *supra* note 8, at A22, col. 1.

<sup>165</sup> Dunn, *supra* note 14, at A30, col. 2.

<sup>166</sup> Talevich v. Voss, 734 F. Supp. 425, 427-28 (C.D. Cal. 1990).

<sup>167</sup> *Id.* at 427.

counties in southern California by helicopter.<sup>168</sup> By June 1990, the spraying program involved more than 480 workers and cost state taxpayers approximately \$36 million.<sup>169</sup> In all, the state dropped about 47,000 gallons of malathion on the spray area and employed close to four billion sterile medflies to breed the medfly out of existence.<sup>170</sup>

While the state monitored the effects of an aerial application of malathion on humans and the environment during the 1981–1982 medfly operation, it did not undertake similar monitoring during the 1990 campaign.<sup>171</sup> Although the results of the 1981–1982 tests showed that aerial spraying killed honey bees, ladybugs, and butterflies and produced outbreaks of harmful pests such as aphids, the tests did not show a correlation between human health problems and malathion spraying.<sup>172</sup> Many individuals exposed to the malathion during the 1990 medfly operation—including homeless persons unable to avoid contact with the spray—complained of flu-like symptoms in the wake of aerial sprayings.<sup>173</sup>

After the state initiated its 1990 program, California entomologists expressed concern that the medfly may never be eradicated completely from the region.<sup>174</sup> Entomologists cited several reasons for this belief: the region's warm weather, which leads to active breeding; the continued discoveries of more flies outside the eradication zone; the presence of a large international airport serving frequent travelers to places where the medfly is endemic; the region's wide variety of hosts on which the medfly may feed; and finally, the area's prevailing winds, which can carry a fly about eight miles.<sup>175</sup> On November 5, 1990, however, the state once again declared victory in its efforts to eradicate the medfly.<sup>176</sup>

#### V. PAST JUDICIAL DEFERENCE TO AERIAL SPRAYING PROGRAMS IN CALIFORNIA

In California, where aerial pesticide programs have resulted in litigation, courts have applied a deferential standard of review to

<sup>168</sup> Ashley Dunn, *Officials Wary as Spraying Ends*, L.A. TIMES, June 14, 1990, at A3, col. 3.

<sup>169</sup> *Id.* at A39, col. 1.

<sup>170</sup> *Id.*

<sup>171</sup> Dolan, *supra* note 8, at A22, col. 3.

<sup>172</sup> *Id.*

<sup>173</sup> See Talevich v. Voss, 734 F. Supp. 425, 428 (C.D. Cal. 1990).

<sup>174</sup> Dolan, *supra* note 8, at A22, col. 3.

<sup>175</sup> *Id.* at A1, col. 6.

<sup>176</sup> Dunn, *supra* note 11, at B1, col. 2.

the state's pest eradication activities.<sup>177</sup> Because most of the litigation has involved economic issues rather than issues of fundamental rights, the courts have required merely that the means used by the state bear a reasonable relation to the ends sought to be attained.<sup>178</sup> Employing such a relaxed standard, California courts have found that landowners were not entitled to pre-abatement judicial challenge,<sup>179</sup> actual notice or an opportunity to be heard prior to the abatement activity,<sup>180</sup> or compensation for property damage resulting from spraying operations.<sup>181</sup>

An early example of the California courts' deference to the CDFA's exercise of its abatement authority, *Skinner v. Coy*,<sup>182</sup> involved destruction of diseased peach trees rather than aerial spraying to eradicate insects. In *Skinner*, a landowner filed an injunction to stop a county agricultural agent from entering his property and destroying certain peach trees that he owned; the trees allegedly were infested with peach mosaic, a transmittable and infectious disease.<sup>183</sup> Although the trial court granted the injunction, the California Supreme Court reversed, deferring to the administrative determination that a nuisance existed, and agreed that the state had the authority summarily to eradicate the public nuisance posed by the trees.<sup>184</sup> The *Skinner* court stated that statutes providing for the summary destruction of vegetation infected with contagious pests without any pre-abatement judicial inquiry are constitutional as long as they define what constitutes a nuisance and provide a right to post-abatement judicial review.<sup>185</sup>

Judicial deference toward state or municipal officials in cases involving the destruction of vegetation was also evident in *Thain v. City of Palo Alto*.<sup>186</sup> In *Thain*, a resident challenged a city "weed" ordinance that permitted city officials to declare certain vegetation

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<sup>177</sup> See generally *Skinner v. Coy*, 13 Cal. 2d 407, 90 P.2d 296 (1939); *Farmers Ins. Exch. v. California*, 175 Cal. App. 3d 494, 221 Cal. Rptr. 225 (1985); *Thain v. City of Palo Alto*, 207 Cal. App. 2d 173, 24 Cal. Rptr. 515 (1962); see also Victor M. Sher, *Pests, Poisons, and Power: Constitutional Implications of State Pest Eradication Projects in California*, 1 J. ENVTL. L. & LITIG. 89, 96-105 (1986).

<sup>178</sup> See, e.g., *Farmers*, 175 Cal. App. 3d at 501-02, 221 Cal. Rptr. at 229; *Thain*, 207 Cal. App. 2d at 186, 24 Cal. Rptr. at 522-23.

<sup>179</sup> *Skinner*, 13 Cal. 2d at 417-18, 90 P.2d at 301.

<sup>180</sup> *Thain*, 207 Cal. App. 2d at 189, 24 Cal. Rptr. at 524-25.

<sup>181</sup> *Farmers*, 175 Cal. App. 3d at 502, 221 Cal. Rptr. at 229-30.

<sup>182</sup> 13 Cal. 2d 407, 90 P.2d 296.

<sup>183</sup> *Id.* at 409-10, 90 P.2d at 297-300.

<sup>184</sup> *Id.*

<sup>185</sup> *Id.*

<sup>186</sup> 207 Cal. App. 2d 173, 24 Cal. Rptr. 515 (1962).

a public nuisance and abate the nuisance should individual property owners fail to do so themselves.<sup>187</sup> The plaintiff claimed that the ordinance was unconstitutional because it failed to provide landowners with actual notice of the city's intent to abate the nuisance.<sup>188</sup> The *Thain* court held that the ordinance was a valid exercise of police power because it promoted the public welfare, and that a rational ground existed for its enactment.<sup>189</sup> Moreover, the court found that the plaintiff was not entitled to actual notice because of a provision in the ordinance stating that the presence of "all" weeds on "any" property constitutes a public nuisance.<sup>190</sup> According to the court, this provision put the plaintiff on notice that city officials could abate public nuisances on all property, including the plaintiff's property.<sup>191</sup>

In a case directly addressing the problems resulting from aerial spraying of malathion, *Farmers Insurance Exchange v. California*,<sup>192</sup> the California Court of Appeals deferred to the CDFA's authority to eradicate pests and refused to allow citizens compensation for property damage resulting from a CDFA spraying program.<sup>193</sup> In *Farmers*, plaintiff insurance companies sued the state for reimbursement claims for damage to automobile paint resulting from the state's aerial pesticide spraying program.<sup>194</sup> The court held that because the damages were inflicted in the course of the proper exercise of the state's police power, they were noncompensable.<sup>195</sup> In this instance, the state action was proper because the court deemed the spraying to be reasonably necessary to protect the safety, health, and general welfare of the community.<sup>196</sup>

Although the *Skinner*, *Thain*, and *Farmers* courts addressed the issue of economic harm rather than personal injury, California courts subsequently refused to compensate plaintiffs for personal injury

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<sup>187</sup> *Id.* at 177, 24 Cal. Rptr. at 517.

<sup>188</sup> *Id.* at 180, 24 Cal. Rptr. at 519.

<sup>189</sup> *Id.* at 186-87, 24 Cal. Rptr. at 522-23. See generally *Patrick v. Riley*, 209 Cal. 350, 287 P. 455 (1930) (director of agriculture permitted summarily to destroy cows suffering from bovine tuberculosis). The *Patrick* court stated that "health regulations enacted by the state under its police power and providing even drastic measures for the elimination of disease, whether in human beings, crops or cattle, in a general way are not affected by constitutional provisions, either of the state or national government." 209 Cal. at 354-55, 287 P. at 456.

<sup>190</sup> *Thain*, 207 Cal. App. 2d at 191, 24 Cal. Rptr. at 526.

<sup>191</sup> *Id.* at 191-92, 24 Cal. Rptr. at 526-27.

<sup>192</sup> 175 Cal. App. 3d 494, 221 Cal. Rptr. 225 (1985).

<sup>193</sup> *Id.* at 502, 221 Cal. Rptr. at 226.

<sup>194</sup> *Id.* at 498-99, 221 Cal. Rptr. at 227.

<sup>195</sup> *Id.* at 504-05, 221 Cal. Rptr. at 231.

<sup>196</sup> *Id.* at 501-02, 221 Cal. Rptr. at 229.

allegedly resulting from state aerial spraying measures.<sup>197</sup> In *Talovich v. Voss*,<sup>198</sup> the United States District Court for the Central District of California refused to grant an injunction to stop further aerial spraying of malathion because the court did not find that exposure to the pesticide caused the plaintiffs' injuries.<sup>199</sup> The plaintiffs, who were homeless, claimed that they suffered the flu-like symptoms commonly associated with malathion poisoning because they did not have access to adequate shelter and thus were unable to avoid contact with the malathion that state officials had sprayed.<sup>200</sup> Although the court found that the plaintiffs' injuries were consistent with malathion poisoning, it refused to grant an injunction because the plaintiffs failed to show a causal connection between their injuries and the malathion spraying.<sup>201</sup>

Similarly, the California Court of Appeals found in *LaBadie v. California*<sup>202</sup> that a plaintiff who suffered injuries as a result of her exposure to malathion could not recover in an action for misrepresentation against the state. The plaintiff in *LaBadie*, who was acutely sensitive to malathion, suffered physical injury as a result of her exposure to malathion sprayed during a declared state of emergency.<sup>203</sup> The plaintiff took measures to avoid contact with the malathion and left the spray area during the time CDFA officials claimed they would be spraying.<sup>204</sup> Because the spraying continued beyond the stated time, the plaintiff unknowingly returned to her home during the course of the spraying operation.<sup>205</sup> The court held that the state was immune from the plaintiff's claim because it found the Emergency Services Act's immunity provision to encompass not only "discretionary" acts but also the "performance of" or "failure to perform" such acts.<sup>206</sup>

## VI. POSSIBILITY OF HEIGHTENED SCRUTINY IN FUTURE JUDICIAL CHALLENGES TO AERIAL SPRAYING PROGRAMS

In practice, the minimum level of review—requiring the state's means to have a reasonable relationship to its ends—can amount to

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<sup>197</sup> *Talovich v. Voss*, 734 F. Supp. 425, 430–34 (C.D. Cal. 1990); *LaBadie v. California*, 208 Cal. App. 3d 1366, 1367–69, 256 Cal. Rptr. 604, 605–06 (1989).

<sup>198</sup> 734 F. Supp. 425 (C.D. Cal. 1990).

<sup>199</sup> *Id.* at 428.

<sup>200</sup> *Id.*

<sup>201</sup> *Id.* at 434.

<sup>202</sup> 208 Cal. App. 3d 1146, 256 Cal. Rptr. 604 (1989).

<sup>203</sup> *Id.* at 1368, 256 Cal. Rptr. at 605.

<sup>204</sup> *Id.*

<sup>205</sup> *Id.*

<sup>206</sup> *Id.* at 1369, 256 Cal. Rptr. at 606.

no review at all, and courts often presume facts supporting a legislative judgment.<sup>207</sup> Therefore, it is unlikely that a court applying such a deferential standard ever would find that a state-mandated aerial application of pesticides was not reasonably related to the goal of pest eradication. If, however, a court found that state legislation burdened the exercise of a fundamental personal right, the court would apply a more exacting standard of review than the minimum rationality standard.<sup>208</sup> Under such circumstances, the court would require that the law be narrowly tailored to meet a compelling or substantial governmental interest.<sup>209</sup>

When deciding whether a right is "fundamental", courts do not constrain themselves necessarily to the text of the Bill of Rights, but may look to the "traditions and [collective] conscience of our people"<sup>210</sup> and the values "implicit in the concept of ordered liberty."<sup>211</sup> In the past, the application of this strict level of scrutiny has led courts to strike down laws infringing upon the right to privacy,<sup>212</sup> autonomy,<sup>213</sup> and family relations.<sup>214</sup>

If courts found that persons have a constitutionally protected right to be free from exposure to toxic pesticides, the level of judicial scrutiny applicable thus would be far more strict than the level currently applied.<sup>215</sup> Plaintiffs in these cases may find such a right within the bounds of the constitutional rights to privacy and autonomy, both of which include the right to make decisions about fundamental matters.<sup>216</sup> The United States Supreme Court has recog-

<sup>207</sup> See, e.g., *United States v. Carolene Products Co.*, 304 U.S. 144, 153-54 (1938).

<sup>208</sup> See generally *Roe v. Wade*, 410 U.S. 113 (1973) (right to abortion); *Griswold v. Connecticut*, 381 U.S. 479 (1965) (use of contraceptives); *Pierce v. Society of Sisters*, 268 U.S. 510 (1925) (law requiring children to attend public schools); *Meyer v. Nebraska*, 262 U.S. 390 (1923) (law forbidding teaching of foreign languages to children).

<sup>209</sup> *Roe*, 410 U.S. at 155; *Shapiro v. Thompson*, 394 U.S. 618, 633-38 (1969) (state law denying welfare assistance to residents of less than one year); *Loving v. Virginia*, 388 U.S. 1, 12 (1967) (Virginia law preventing marriage between persons solely on basis of race); *Skinner v. Oklahoma*, 316 U.S. 535, 541 (1942) (Oklahoma law providing for sterilization of habitual criminals of felonies involving moral turpitude).

<sup>210</sup> See, e.g., *Griswold*, 381 U.S. at 493 (Goldberg, J., concurring, quoting *Snyder v. Massachusetts*, 291 U.S. 97, 105 (1933)).

<sup>211</sup> *Id.* at 500 (Harlan, J., concurring, quoting *Palko v. Connecticut*, 302 U.S. 319, 325 (1937)).

<sup>212</sup> See, e.g., *Griswold*, 381 U.S. at 485-86.

<sup>213</sup> See, e.g., *Roe*, 410 U.S. at 166.

<sup>214</sup> See, e.g., *Moore v. East Cleveland*, 431 U.S. 494, 506 (1977) (invalidation of zoning ordinance limiting occupancy of dwelling to members of single "family", narrowly defined to include only a few categories of related individuals).

<sup>215</sup> See *Sher*, *supra* note 177, at 96-105.

<sup>216</sup> See, e.g., *Roe*, 410 U.S. at 152-53 (guarantee of personal privacy includes those "personal

nized the right to bodily integrity in a variety of intimate matters.<sup>217</sup> Further, the Supreme Court has held that, absent a compelling countervailing government interest, the right of individual autonomy is paramount.<sup>218</sup>

One commentator has drawn an analogy between the personal interest in remaining free from exposure to toxic pesticides and the constitutionally protected interest in remaining free to decide whether to submit to the treatment of antipsychotic drugs.<sup>219</sup> Although courts recognize that the government has a legitimate interest in protecting its citizens from the mentally ill, and that this protection sometimes may entail the forcible administration of drugs, they still recognize that mental patients retain a liberty interest in being free from involuntary exposure to such drugs.<sup>220</sup> With this right to be free from involuntary exposure in mind, courts decide cases involving the forcible administration of drugs by balancing the competing individual and governmental interests.<sup>221</sup>

Although states have a legitimate interest in protecting citizens from the agricultural effects of medflies and the health effects of EEE-bearing mosquitos, courts should recognize that citizens also retain a liberty interest in being free from involuntary exposure to toxic pesticides. Even though the governmental interest in protecting the public welfare may outweigh the individual liberty interest in a given situation, the recognition of such an interest at least would give citizens a "hook" on which to hang a constitutional challenge. Moreover, the recognition of such a right would force a state to tailor its spraying programs narrowly to cause the smallest possible intrusion on that individual right rather than providing a broad "reasonable" basis for its decision.

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rights that can be deemed 'fundamental' or 'implicit in the concept of ordered liberty'" (quoting *Palko v. Connecticut*, 302 U.S. 319, 325 (1937)); *Loving v. Virginia*, 388 U.S. 1, 12 (1967) (fundamental right to marriage); *Skinner v. Oklahoma*, 316 U.S. 535, 541 (1942) (fundamental right to procreation).

<sup>217</sup> See, e.g., *Carey v. Population Serv. Int'l*, 431 U.S. 678, 684-86 (1977) (use of contraceptives); *Roe*, 410 U.S. at 152-54 (abortion); *Loving*, 388 U.S. at 12 (marriage); *Skinner*, 316 U.S. at 541 (procreation).

<sup>218</sup> See *Roe*, 410 U.S. at 152-53.

<sup>219</sup> *Sher*, *supra* note 177, at 99-101.

<sup>220</sup> *Bee v. Greaves*, 744 F.2d 1387, 1391-94 (10th Cir. 1984), *cert denied*, 469 U.S. 1214 (1985); *Rogers v. Okin*, 634 F.2d 650, 653 (1st Cir. 1980), *vacated and remanded on other grounds sub nom. Mills v. Rogers*, 457 U.S. 291, 299, 306 (1982); see also *Washington v. Harper*, 494 U.S. 210, 219-27 (1990) (court upheld prison policy requiring forcible administration of treatment with antipsychotic drugs to mentally ill state prisoner against prisoner's will and without judicial hearing).

<sup>221</sup> *Bee*, 744 F.2d at 1395-96; *Rogers*, 634 F.2d at 657.

Finding a fundamental right and applying a heightened level of scrutiny to litigation involving toxic pesticides may be problematic because of the difficulty in proving causation in toxic tort cases.<sup>222</sup> The California courts' reluctance to draw the connection between human health problems and the spraying of a toxic pesticide in *Talevich* may be indicative of how future courts will treat judicial challenges to malathion spraying programs.<sup>223</sup> Lacking concrete data on the specific hazards associated with human exposure to malathion, courts are unlikely to find that a fundamental interest is at stake, and therefore are not likely to apply heightened scrutiny.

With greater research, however, it may be possible to understand fully the effects of malathion on the public. Using the results of more detailed research, courts may be able to make an informed decision about whether heightened scrutiny is appropriate. Lacking sufficient scientific data, state legislatures should recognize that it is unwise to allow unwilling state residents and the environment to be exposed to toxic pesticides. Therefore, legislators in Massachusetts and California should amend state law to provide greater protection to the public from policy decisions that fail to consider long-term public impact. Furthermore, such amendments should prevent public officials from circumventing the environmental legislation designed to force them to consider the long-term environmental impact of their actions.

## VII. ANALYSIS OF THE MASSACHUSETTS MALATHION PROGRAM

### A. Violation of FIFRA

If reports from residents in southeastern Massachusetts are accurate, it appears as though the Commonwealth violated FIFRA labeling instructions by discharging malathion within 400 feet of bodies of water more than half an acre in size.<sup>224</sup> Because it is up to the Massachusetts DFA to enforce such violations,<sup>225</sup> and the DFA was largely responsible for the spraying program, however, it is unlikely that any legal action will be forthcoming.

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<sup>222</sup> See generally Rory A. Valas, Comment, *Toxic Palsgraf: Proving Causation When the Link Between Conduct and Injury Appears Highly Extraordinary*, 18 B.C. ENVTL. AFF. L. REV. 773 (1991).

<sup>223</sup> See *supra* notes 198-201 and accompanying text.

<sup>224</sup> See 7 U.S.C. § 136 (1988); see also *supra* notes 41-51 and accompanying text.

<sup>225</sup> See 7 U.S.C. § 136w-1 (1988).

*B. Violation of State Law*

Pursuant to the SRMCB's enabling statute, the SRMCB either must declare a public nuisance and allow landowners in an infested area the opportunity to abate the public nuisance themselves,<sup>226</sup> or must hold a public hearing to decide whether it should make low land improvements.<sup>227</sup> If the SRMCB decides that EEE-bearing mosquitos pose a public nuisance, it may take action only after the affected landowners fail to take the required remedial measures.<sup>228</sup> The SRMCB's enabling statute does not provide for emergency pest control measures that preempt landowners' right to take these measures themselves.

If a state agency decides that low land improvements will promote the "public health, safety or convenience," it may initiate public hearings only after it has given proper notice to the affected landowners.<sup>229</sup> As stated earlier, however, the right to call for such hearings does not give the SRMCB the right to take action without the consent of those landowners.<sup>230</sup> Therefore, it would seem that initiating an aerial spraying program over 700 thousand acres of land without either first allowing affected landowners an opportunity to abate the nuisance themselves or holding a public hearing to discuss the wisdom of making such "improvements" would be beyond the scope of the SRMCB's authority under its enabling statute.

In its "Notice of Health Emergency and Mosquito Eradication," however, the SRMCB did not state that it was acting pursuant to its authority under its enabling statute.<sup>231</sup> Instead, the SRMCB claimed that it was acting pursuant to an exemption provided in the Wetlands Protection Act.<sup>232</sup> The Wetlands Protection Act, however, does not give the SRMCB the authority to conduct aerial pesticide sprayings; rather, it merely restricts persons who wish to "remove, fill, dredge or alter" wetlands.<sup>233</sup>

The SRMCB may have been able to conduct an emergency aerial spraying operation pursuant to emergency regulations.<sup>234</sup> Such emergency regulations would have permitted the SRMCB temporarily to

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<sup>226</sup> MASS GEN.L. ch. 252, § 5B (1988 & Supp. 1990).

<sup>227</sup> *Id.* §§ 4A, 5.

<sup>228</sup> *Id.* § 5B.

<sup>229</sup> *Id.* §§ 4A, 5.

<sup>230</sup> *See id.*

<sup>231</sup> *See* STATE RECLAMATION AND MOSQUITO CONTROL BOARD, *supra* note 116, at 1.

<sup>232</sup> *Id.*

<sup>233</sup> MASS. GEN. L. ch. 131, § 40 (1974).

<sup>234</sup> *See* MASS. GEN. L. ch. 30A, § 3 (1979).

waive notice and public hearing requirements if adherence to those requirements would have been contrary to the public interest.<sup>235</sup> Because the SRMCB did not attempt to promulgate any emergency regulations, its activities were outside the bounds of the authority vested in it by the legislature.<sup>236</sup>

Although the August 23, 1990 declaration of emergency by the DFA commissioner purportedly exempted the SRMCB from the Massachusetts pesticide regulations,<sup>237</sup> it is unclear whether the DFA was authorized to promulgate regulations waiving notice requirements—MPCA's language does not provide this authority. Because the DFA's decision to waive its notice requirements affected such a large number of people in a direct and conceivably harmful manner, and because the legislature did not explicitly give the DFA the authority to waive the requirements, the DFA arguably exceeded the authority the state legislature granted it under MPCA.

Upon a declaration from the governor that a public health emergency exists, the commissioner of public health may take such action as "he may deem necessary" to assure the maintenance of public health.<sup>238</sup> Arguably, pursuant to an emergency declaration from the governor, the commissioner could have ordered the SRMCB to conduct its aerial spraying program. Because the governor failed to make such a declaration, however, the commissioner of public health did not have the authority to take such action.

### C. Amending Massachusetts Law

Massachusetts law is currently unclear about the criteria to be used in determining when a public health threat exists. Further, the law is unclear regarding the actions that are appropriate under the varying circumstances of a public health threat. While Massachusetts law recognizes that mosquitos may pose a public health risk, the law does not state specifically the means to be used, or the coordination between state agencies that is necessary, to conduct a massive eradication program.<sup>239</sup> Moreover, because the EOEA secretary may exempt spraying activities from MEPA review requirements,<sup>240</sup> Massachusetts officials are not required either to analyze the full effects

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<sup>235</sup> *Id.*

<sup>236</sup> See MASS. GEN. L. ch. 252, §§ 1-14C (1988 & Supp. 1990).

<sup>237</sup> See MASSACHUSETTS DEP'T OF FOOD AND AGRICULTURE, *supra* note 121, at 1.

<sup>238</sup> MASS. GEN.L. ch. 17, § 2A (1981 & Supp. 1990).

<sup>239</sup> See MASS. GEN. L. ch. 252, §§ 1-14C (1988 & Supp. 1990).

<sup>240</sup> See *supra* note 101 and accompanying text.

of their activities on the public and the environment or to plan for future threats to the public health. Consequently, decisionmakers do not have to consider the long-term interests of the public and the environment when deciding how the state should address an immediate public health threat. The immediate and certain threat of mosquitos bearing the EEE virus easily outweighs the intangible threat of malathion.

As the law currently stands, the SRMCB does not have the clear authority to conduct the type of wide-scale aerial spraying program that occurred in August 1990. If the state legislature wants the SRMCB to have such authority, it should amend state law specifically to give the SRMCB that authority. More importantly, because the EEE virus appears cyclically, and an outbreak therefore will occur again in the future, the legislature should amend current law to clarify the roles and responsibilities of each state agency that would be involved in a public health threat posed by mosquitos bearing the EEE virus.

While the DPH is currently responsible for determining whether mosquitos bearing EEE pose a threat to the public health,<sup>241</sup> there are no clear standards for making such a determination. During the spring of 1990, the DPH recognized the existence of unusually high numbers of mosquitos and the presence of EEE in certain mosquitos, but the department lacked any statutory assistance in deciding when the EEE-bearing mosquitos posed a threat that reached "emergency" proportions.<sup>242</sup> Additionally, while the the EOEA recognized its responsibility to address the mosquito threat, officials within the EOEA did not seem to have a clear idea of the appropriate means of addressing the threat.<sup>243</sup>

The Massachusetts legislature either should draft or should force the state agencies to draft explicit criteria to determine appropriate actions under the varying circumstances of an EEE threat. For instance, if the dangerous combination of large mosquito populations and the occurrence of the EEE virus is detected at an early point in the spring, the SRMCB should have to conduct ground spraying in specific high-risk areas. Additionally, the legislature could require the SRMCB to employ a long-term plan of nonpesticide measures or pesticide measures aimed at reducing the chance of exposing the general public to toxic pesticides.

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<sup>241</sup> See *supra* notes 52-54 and accompanying text.

<sup>242</sup> See MASS. GEN. L. ch. 17, §§ 1-7A (1981 & Supp. 1990).

<sup>243</sup> See Letter from Mark Buffone, *supra* note 108, at 1.

The legislature also may wish to amend the commonwealth's pesticide laws to allow aerial pesticide spraying only after agencies have exhausted means that are less damaging both to the public health and the environment. Short of amending the manner in which the commonwealth may apply pesticides, the legislature should force the SRMCB to adhere to MEPA. To comply with MEPA, the SRMCB should evaluate carefully all of the effects of the aerial spraying of pesticides, such as malathion, when it devises future solutions to the public health threat posed by pests.

The legislature should amend MEPA to require that state agencies file an ENF, and subsequently an EIR, for all actions that arguably may have an adverse effect on the environment. Moreover, the EOEAs secretary should not have the sole discretion regarding whether such action has an effect on the environment, particularly when the secretary is involved in implementing the agency action. Instead, MEPA should be amended to allow interested citizens to trigger the review process. Additionally, courts should be able to review decisions that MEPA does not apply to a certain activity.

## VIII. CALIFORNIA'S MALATHION PROGRAM

### A. *Violation of State Law*

Unlike in Massachusetts, the state agency charged with pest eradication in California did not suffer from statutory ambiguity in the exercise of its authority. The California Code explicitly gives the director of the CDFA the authority to conduct pest eradication measures through the application of registered pesticides.<sup>244</sup> The only conceivable restriction on the CDFA is the requirement that it use nonpesticide measures to the maximum extent feasible.<sup>245</sup> Given the deference that California courts traditionally have granted to state pest eradication programs,<sup>246</sup> however, it seems unlikely that a court would have found nonpesticide measures a feasible alternative to an aerial pesticide program during the 1990 medfly eradication campaign.

As far as public notice is concerned, the California Code merely requires that the CDFA give individual notice to landowners in urban areas.<sup>247</sup> For nonurban landowners, the code only requires

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<sup>244</sup> CAL. FOOD & AGRIC. CODE § 5054 (West 1990).

<sup>245</sup> See *id.* § 5051.

<sup>246</sup> See *supra* notes 177-206 and accompanying text.

<sup>247</sup> See CAL. FOOD & AGRIC. CODE §§ 5771-5780 (West 1986 & Supp. 1991).

notice through a newspaper of general circulation.<sup>248</sup> Additionally, the state legislature has exempted programs such as CDFA aerial spraying programs from California's primary environmental regulation law, CEQA.<sup>249</sup> Therefore, an environmental review of the effects of the state's aerial spraying program on the public health and the environment was not required by law.<sup>250</sup> Moreover, because the state conducted the entire operation pursuant to a declaration of emergency by the governor of California, the CDFA was acting pursuant to all police power vested in the state.<sup>251</sup>

### *B. Amending California Law*

Although California's aerial pesticide program adhered to the letter of the law, it is obvious that after the seven previous campaigns waged against the medfly during the 1980s, the state's current course of action will not cure the long-term problem that an infestation of medflies in southern California presents. Such a long history of infestations causes one to wonder whether the medfly is now firmly established in southern California. Instead of repeatedly responding to "infestations" of medflies with a short-term band-aid remedy that causes tremendous damage to southern California's natural ecosystem by killing "good bugs", the state legislature should consider forcing the CDFA to develop long-range plans to address the threat to California's agricultural industry. The CDFA also should present any long-range measures designed to eradicate the medflies to the public and to experts from outside the CDFA for approval. Since the CDFA's primary responsibility is the protection of California's agriculture industry, it would be wise to have public health officials review eradication measures that might affect the health of the general public.

Additionally, one must question the propriety and legality of the governor's ability to deem the presence of medflies in southern California a "calamity" and thus invoke the Emergency Services Act<sup>252</sup>—particularly when such a declaration exempts pest eradication programs from CEQA regulations that would require an analysis of the full effects of the spraying program on the public and the environ-

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<sup>248</sup> *Id.* § 5051, amended by 1987 Cal. Legis. Serv. ch. 1284, § 2 (West).

<sup>249</sup> See CAL. PUB. RES. CODE § 21080.5 (West 1986 & Supp. 1991).

<sup>250</sup> See *id.*

<sup>251</sup> See CAL GOV'T. CODE § 8627 (West 1980 & Supp. 1991).

<sup>252</sup> CAL. CODE REGS. tit. 14, § 15359 (1986).

ment.<sup>253</sup> By allowing the governor to address a long-term problem by simply labeling it an "emergency", the California legislature is ignoring its responsibility to make laws regarding pest eradication.

Finally, the state legislature should not allow pest eradication programs in general to be exempt from the categories of projects for which state agencies must file EIRs under CEQA. The entire purpose of CEQA is to inform the public of the potential damage to the environment that state projects may cause.<sup>254</sup> The mere inconvenience of compliance with the CEQA requirements should not be sufficient reason to allow the state to neglect an analysis of the effects of an aerial spraying program on the public and the environment. In fact, the magnitude of the state's efforts in 1990 and the negative response to the program from the general public suggests that it is imperative the state provide its citizens with the best information possible on the impact of continuous application of malathion on southern California.

#### IX. CONCLUSION

Current law in Massachusetts and California makes it too easy for those states to expose the public and the natural environment to the potential dangers from toxic pesticides, particularly when the human health effects are suspect and the environmental effects are significant. Because it does not seem likely that state courts will strike down state aerial pesticide programs as violating any constitutional right, Massachusetts and California legislators should amend their states' law to provide greater protection to human health and the environment. In Massachusetts, legislators should amend state law to clarify and coordinate the roles of the different state agencies in conducting pest eradication programs. Additionally, legislatures in both states should set out strict criteria not only for identifying potential threats from pests, but also for mandating incremental remedial measures that pose the least threat to the public health and the environment. These measures should include nonpesticide alternatives. Finally, state agencies should place greater emphasis on input from the public and outside public health experts. The government should not usurp that input, as has been the case of California, by declarations of emergencies when true emergencies do not exist.

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<sup>253</sup> CAL. PUB. RES. CODE § 21080.5 (West 1986 & Supp. 1991).

<sup>254</sup> See *id.* § 21000.