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An Agricultural Law Research Article

## **Managing Agricultural Pollution**

by

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# Managing Agricultural Pollution

John C. Keeney†

## INTRODUCTION

Today's agricultural operations, especially those that produce the greatest share of the nation's food and fibre, are often sophisticated industrial activities which produce significant amounts of environmental pollution.<sup>1</sup> Non-point source pollutants such as sediment and associated fertilizers, pesticides, and organic matter are emitted by general land cultivation, pasturing and grazing.<sup>2</sup> At the same time, concentrated activities, such as animal feedlots and mushroom composting operations, emit point source air and water pollution.<sup>3</sup>

Three relatively recent trends have greatly increased the potential for both types of agricultural pollution. First, farming has become increasingly capital intensive and reliant on the products of technology (e.g., pesticides, fertilizers, and heavy equipment). Second, the organizational structure of agriculture has gradually but significantly changed. In 1940 there were 6,350,000 farms in the United States averaging 167 acres each; in 1980 there were only 2,428,000 farms with an average size of 429 acres.<sup>4</sup> The largest of these farms currently produce a disproportionately large share of the nation's total agricultural output.<sup>5</sup> Finally, production from concentrated animal confinement facilities, such as feedlots and poultry barns, has increased markedly and comes from much larger individual facilities, congregated in a few re-

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1. See, e.g., *Bower v. Hog Builders, Inc.*, 461 S.W.2d 784 (Mo. 1970); *Rust v. Guinn*, 429 N.E.2d 299 (Ind. App. 1981); *Lacy Feed Co. v. Parrish*, 517 S.W.2d 845 (Tex. Civ. App. 1974).

2. See Schloesser, *Agricultural Non-Point Source Water Pollution Control Under Sections 208 and 303 of the Clean Water Act: Has Forty Years of Experience Taught Us Anything?*, 54 N.D.L. REV. 589 (1978).

3. The Clean Water Act defines a point source as "any discernible, confined and discrete conveyance including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. . . ." 33 U.S.C. § 1362(14) (Supp. V 1981).

4. 1981 STATISTICAL ABSTRACT OF THE UNITED STATES 660 (table 1165).

5. See ECONOMIC RESEARCH SERVICE, U.S. DEPT. OF AGRICULTURE, AGRICULTURAL OUTLOOK 11 (table) (Oct. 1982).

gions of the country.<sup>6</sup>

At the same time that the potential for serious agricultural pollution has increased, so too has the threat to agriculture itself, through the continuing conversion of farmland to other uses.<sup>7</sup> The purpose of this article is to suggest means of managing agricultural pollution without contributing to the often premature removal of land from farm operations. The approach recommended is first to develop and enforce means to minimize the environmentally harmful externalities associated with farming, through government regulation and incentive programs designed to encourage soil conservation and integrated pest management. Second, agricultural areas should be protected from incompatible development by state or local land use controls, supplemented by incentives that make it feasible, and in fact desirable, for farmers to keep farming.

After identifying the major sources and types of agricultural pollution, the Article will review four approaches to managing that pollution: (1) judicial resolution of conflicts based on principles of common law nuisance; (2) technology-forcing legislation; (3) legalization of minimally nuisance-creating farming operations through enactment of "right-to-farm" laws; and (4) programs that separate agricultural activities from incompatible non-agricultural activities.<sup>8</sup> The Article concludes by proposing an integrated management strategy that practically and realistically draws from several of these approaches.

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6. See *infra* notes 19-21 and accompanying text.

7. The Council on Environmental Quality reported that more than eight million acres of prime farmland were converted to urban development, reservoirs, highways, recreation, surface mining and other uses from 1967 to 1975. U.S. COUNCIL ON ENVIRONMENTAL QUALITY, EIGHTH ANNUAL REPORT 90 (1977). The Council's tenth report estimated that agricultural land of all types (not only prime) is currently being converted at a rate of three million acres a year. U.S. COUNCIL ON ENVIRONMENTAL QUALITY, TENTH ANNUAL REPORT 396 (1979). See also NATIONAL AGRICULTURAL LANDS STUDY, FINAL REPORT (1981).

8. A fifth approach, the provision of financial assistance, tax incentives and technical services, for decades a primary activity of the federal and state departments of agriculture, especially in the area of soil conservation and erosion control, is beyond the scope of the article. See generally R. HELD & M. CLAWSON, SOIL CONSERVATION IN PERSPECTIVE (1965); SOIL CONSERVATION SOCIETY OF AMERICA, SOIL CONSERVATION POLICIES: AN ASSESSMENT (1979); THE FUTURE OF AMERICAN AGRICULTURE AS A STRATEGIC RESOURCE (S. Batie & R. Healy eds. 1980) [hereinafter cited as Batie & Healy]; R. DALLAVALLE & L. MAYER, SOIL CONSERVATION IN THE UNITED STATES: THE FEDERAL ROLE (1980); N. SAMPSON, FARMLAND OR WASTELAND: A TIME TO CHOOSE (1981); SOIL CONSERVATION POLICIES, INSTITUTIONS, AND INCENTIVES (H. Halcrow, E. Heady & M. Cotner eds. 1982); Schloesser, *supra* note 2; Uchtmann & Seitz, *Options for Controlling Non-Point Source Water Pollution: A Legal Perspective*, 19 NAT. RESOURCES J. 587 (1979); Garner, *Innovative Strategies for Conserving Soil and Water*, 1982 AGRIC. L.J. 543 (1982).

## I

## PRINCIPAL ACTIVITIES THAT POLLUTE THE ENVIRONMENT

*A. Land Cultivation*

Farmers remove the natural cover of the land, then plough, cultivate, irrigate, and apply fertilizers and pesticides. These activities usually tend to increase the amount of soil erosion<sup>9</sup> and run-off, which in turn both increase the risk of flooding and contribute additional sediments,<sup>10</sup> nutrients, organic matter, and toxic substances to hydrological systems. Moreover, agricultural activities increase the rate of topsoil loss above that occurring naturally, thus wasting a critically valuable resource and reducing the long-run productivity of the land.

*B. Application of Fertilizers, Pesticides, and Herbicides*

Fertilizers contribute critical nutrients<sup>11</sup> to assure or increase plant growth, but their use often has adverse effects on the natural environment. Annual fertilizer use in the United States has increased from 31.8 million tons in 1965 to 47.6 million tons in 1978, and accounts for some thirty to forty percent of annual crop and fibre production.<sup>12</sup> Yet, crop production utilizes only about fifty percent of the nitrogen, twenty percent of the phosphorus and thirty-five percent of the potassium applied as fertilizer; the remainder is lost through leaching into soils, dissolution in run-off, soil erosion, and through chemical reactions that make it unavailable to plants.<sup>13</sup> In 1975, the National Commission on Water Quality estimated that 4.3 million tons of nitrogen and 1.5 million tons of phosphorus dissolved annually into surface waters.<sup>14</sup> The primary damage caused by the introduction of fertilizers into surface waters is an acceleration of the natural rate of eutrophication, the process of nutritional enrichment of natural waters. This acceleration dis-

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9. Recent studies indicate that as much as one-third of the topsoil from U.S. cropland has been lost through erosion, NATIONAL AGRICULTURAL LANDS STUDY, SOIL DEGRADATION: EFFECTS ON AGRICULTURAL ACTIVITY (INTERIM REPORT No. 4) (1980) [hereinafter cited as SOIL DEGRADATION], and that cropland soil loss continues at the rate of over 2.5 billion tons per year. CONSERVATION FOUNDATION, STATE OF THE ENVIRONMENT 1982, at 234-35 (1982) [hereinafter cited as CF ENVIRONMENT 1982]. Whereas the average annual rates of sheet and rill erosion for forestland and pastureland are 1.2 and 2.6 tons per acre per year, respectively, the rate for cropland is 4.7 tons per acre. SOIL DEGRADATION, *supra*, at 12, 20.

10. Sediment is itself a pollutant because it clouds the water, settles to the stream bed and interferes with the natural cycles of stream and lake wildlife, and acts as a carrier for pesticides and fertilizers. CF ENVIRONMENT 1982, *supra* note 9, at 225-26.

11. Mainly nitrogen, phosphorus and potassium. CF ENVIRONMENT 1982, *supra* note 9, at 239.

12. Batie & Healy, *supra* note 8, at 100.

13. *Id.* at 82.

14. REPORT OF THE STAFF TO THE NATIONAL COMMISSION ON WATER QUALITY II-183 (1976) [hereinafter cited as NCWQ STAFF REPORT].

rupts the natural balance of the aquatic environment, leading to algae blooms and fish kills.<sup>15</sup>

The use of pesticides and herbicides creates well-known hazards to applicators, farm labor, nearby residential areas, and food consumers. Pesticides also run off into surface waters in relatively small amounts.<sup>16</sup> Because farmers have placed more emphasis on integrated pest management during the last few years,<sup>17</sup> the agricultural pesticide use growth rate has slowed.<sup>18</sup>

### C. Operation of Concentrated Production Facilities

In the last two or three decades, American beef, pork, and poultry production has increased significantly.<sup>19</sup> In addition, this production, together with dairy production, has become concentrated in particular regions,<sup>20</sup> and the individual productive unit has become larger and more intense.<sup>21</sup> The concentration of tens of thousands of cattle, hogs, or hens in relatively small areas presents significant potential for air and water pollution.

### D. Irrigation

Irrigation brings arid land into production, protects against

15. See Beeton, *Eutrophication of the St. Lawrence Great Lakes*, 10 LIMNOLOGY & OCEANOGRAPHY 240 (1965), reprinted in T. DETWYLER, *MAN'S IMPACT ON ENVIRONMENT* 225, 238 (1971) (discussing the effects of domestic and agricultural run-off on the Great Lakes).

16. See N. SAMPSON, *supra* note 8, at 167. The amount of pesticide run-off is often a secondary consideration, however, since some pesticides are so toxic or persistent that any quantity in surface waters presents a serious problem. *Id.*

17. See D. BOTTRELL, *INTEGRATED PEST MANAGEMENT* (1979); U.S. COUNCIL ON ENVIRONMENTAL QUALITY, *ELEVENTH ANNUAL REPORT* 321-22 (1980).

18. ECONOMIC ANALYSIS BRANCH, *BENEFITS AND FIELD STUDIES DIVISION, OFFICE OF PESTICIDE PROGRAMS, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGULATORY IMPACT ANALYSIS: DATA REQUIREMENTS FOR REGISTERING PESTICIDES UNDER THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT 24-25* (1982) [hereinafter cited as *REGULATORY IMPACT ANALYSIS*].

19. See generally Martin, *Beef*, in L. SCHERTZ, *ANOTHER REVOLUTION IN U.S. FARMING?* 90 (1979); STATISTICAL REPORTING SERVICE, U.S. DEPT. OF AGRICULTURE, *LIVESTOCK AND MEAT: OUTLOOK AND SITUATION* 17 (Aug. 1982); Rogers, *Poultry and Eggs*, in L. SCHERTZ, *supra*, at 153-56; ECONOMIC RESEARCH SERVICE, U.S. DEPT. OF AGRICULTURE, *POULTRY AND EGGS: OUTLOOK AND SITUATION* 13 (Aug. 1982).

20. Martin, *supra* note 19, at 94, 104; Forste & Frick, *Dairy*, in L. SCHERTZ, *supra* note 19, at 121-27; ECONOMIC RESEARCH SERVICE, U.S. DEPT. OF AGRICULTURE, *LIVESTOCK AND MEAT: OUTLOOK AND SITUATION (LMS 244)* at 23 (Feb. 1982); ECONOMIC AND STATISTICS SERVICE, U.S. DEPT. OF AGRICULTURE, *POULTRY AND EGG OUTLOOK AND SITUATION* 19 (May 1982).

21. Martin, *supra* note 19, at 101; STATISTICAL REPORTING SERVICE, U.S. DEPT. OF AGRICULTURE, *LIVESTOCK AND MEAT STATISTICS (STAT. BUL. 522), SUPPLEMENT FOR 1980*, at 55 (table) (1981); Forste & Frick, *supra* note 20, at 145; ECONOMIC AND STATISTICS SERVICE, U.S. DEPT. OF AGRICULTURE, *POULTRY AND EGG OUTLOOK AND SITUATION* 19 (May 1982).

drought, facilitates double cropping, and permits more profitable crop production. Its use has tripled since 1940, even though the total amount of land cropped has remained fairly constant.<sup>22</sup> Irrigation may affect water quality in any one of a number of ways. First, irrigation return flow salinity levels may be higher than natural water flows because the irrigation water dissolves salts that exist in relatively dry soils. These salts in turn become further concentrated through evapo-transpiration and may cause a build-up of salinity levels in the root-feeding strata where there is inadequate drainage.<sup>23</sup> Second, irrigation water may either deposit sediment in the receiving soils or cause additional erosion. Third, irrigation may carry nitrogen, phosphorus, and pesticides to the receiving waters. Finally, irrigation may alter the hydrological characteristics<sup>24</sup> of the receiving system.

Irrigation water may infiltrate into the groundwater, or it may flow as "tailwater"<sup>25</sup> to surface waters as either a non-point or a point source (such as a flow from a field drainage system). Irrigational impacts on water quality vary tremendously from one area to another, depending on such factors as initial water quality, soil composition, irrigation technique, agricultural practices and investments, weather, and climate.<sup>26</sup>

#### *E. Dredging and Filling Activities that Contribute Solid Materials to Rivers, Bays, and Marshes*

Sediment is deposited in streambeds, wetlands, and bays as a result of dam and levee construction, terracing, the clearing out of drainage ditches, and to a lesser extent from general cultivation.<sup>27</sup> These areas are ecologically critical—they serve as spawning and nursery areas for commercial and sport fish, act as natural cleansers for airborne and waterborne pollutants, and supply essential nesting and wintering areas for waterfowl<sup>28</sup>—and sediment deposits, especially those containing pesticides, may have adverse impacts on them. As yet, little information is available on the nature and extent of these deposits and their

22. Frederick, *Irrigation and the Future of American Agriculture*, in Batie & Healy, *supra* note 8, at 157. Most of that increase has come from groundwater withdrawals, which increased 300 percent during the same period. *Id.* at 175. In many parts of the country, these groundwater withdrawals are extracting water at a much greater rate than the rate of natural replenishment. This not only increases the cost of withdrawal but also threatens the long term continuation of agriculture in those areas.

23. NCWQ STAFF REPORT, *supra* note 14, at II-169.

24. The timing and rate of flow and the allocation between ground and surface water.

25. "Tailwater" is the water that flows back into the natural hydrological system after having passed through the network of irrigation facilities.

26. NCWQ STAFF REPORT, *supra* note 14, at II-169.

27. Blumm, *Wetlands Protection and Coastal Planning: Avoiding the Perils of Positive Consistency*, 5 COLUM. J. ENV'T'L. L. 69 (1978).

28. *Id.* at 69-70.

harm.<sup>29</sup>

### F. Other Agricultural Activities

Other agricultural activities may generate pollution, such as the use of noise-producing heavy equipment or devices to scare away birds,<sup>30</sup> burning of stalks, husks and other agricultural debris,<sup>31</sup> and land cultivation that produces dust.<sup>32</sup> For example, the burning of grass straw in the grass seed production area of Oregon and the burning of rice straw in the delta area of California are of sufficient severity so that each state has established expansive permit and monitoring programs, including hour-by-hour meteorological observations to determine safe burning periods.<sup>33</sup> Likewise, dust is more than a minor problem in the High Plains from Montana to the Texas panhandle. Blowing dust from wheat fields in the spring becomes a major traffic problem in certain areas and affects people in a rather wide, though sparsely settled, area.<sup>34</sup>

## II

### RESOLUTION OF LAND USE CONFLICTS BASED ON COMMON LAW NUISANCE

#### A. General Principles

The term "nuisance" has acquired many meanings over the years, but is used in this context to denote the harm resulting from another's action or from a physical condition caused by another. Nuisance focuses on the effect of the conduct and not on the nature of the conduct itself, and it may not necessarily be remediable in court.<sup>35</sup> Thus, odor from a feedlot and the noise from a "corn cannon" perceived by a neighboring landowner may be nuisances, but whether the neighbor will be able to recover damages or enjoin the conduct because of what he has suffered will depend upon a number of factors.<sup>36</sup>

The *Restatement of Torts* defines a private nuisance as "a non-trespassory invasion of another's interest in the private use and enjoy-

29. Blumm, *The Clean Water Act's Section 404 Permit Program Enters Its Adolescence: An Institutional and Programmatic Perspective*, 8 *ECOLOGY L.Q.* 410, 431-32 (1980).

30. *See, e.g.*, *Maykut v. Plasko*, 170 Conn. 310, 365 A.2d 114 (1976).

31. *See, e.g.*, CAL. HEALTH & SAFETY CODE §§ 41850-64 (West 1980).

32. *See, e.g.*, *Haas v. Levin*, 625 F.2d 1384 (10th Cir. 1980).

33. OR. ADMIN. RULES 340-26-010 to -025 (1982), *reprinted in* ENV'T REP. (BNA) 486.0575-.0583; CAL. ADMIN. CODE tit. 17, § 80150(d) (1983), *reprinted in* ENV'T REP. (BNA) 321.0510.

34. Letter from Prof. Donald T. Epp, Pennsylvania State University, to author (Mar. 3, 1983).

35. *See* RESTATEMENT (SECOND) OF TORTS § 821A comment b (1979).

36. *See infra* text accompanying notes 43-46.

ment of land.”<sup>37</sup> In order to prevail on a nuisance claim, the plaintiff must show (1) some form of property interest in land, (2) impaired enjoyment of that interest, and (3) actions by the defendant that are the proximate cause of the harm.<sup>38</sup> In most cases involving agricultural nuisance, it is easy for a plaintiff to demonstrate these elements.<sup>39</sup>

An agriculturalist whose activities interfere with the use and enjoyment of another's land will be subject to liability under private nuisance law where the interference is either (1) “intentional and unreasonable,” or (2) “unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.”<sup>40</sup> Adherence to the latter principle produces insensitivity to the particular land use conflicts so often involved in agricultural pursuits and should not be the primary theory of nuisance liability applied to agricultural nuisances. Rather than limiting liability to conduct which is inappropriate in a particular location, reliance on this theory will discourage conduct that can be classified in an abstract sense as wrongful, independent of its location.

The former basis of private nuisance liability requires that the defendant's interference be intentional and unreasonable. According to the *Restatement*, a defendant's interference is intentional if he “(a) acts for the purpose of causing [interference], or (b) knows that it is resulting or is substantially certain to result from his conduct.”<sup>41</sup> Most agriculturalists who create nuisances rarely act unintentionally with respect to their neighbors. Feedlot operators, mushroom growers, and farmers who spray crops with pesticides clearly act intentionally in the ordinary course of conducting their businesses. Certainly they are acting intentionally where they continue their activities after the neighbor complains about odors, dust, or spray.

In an agricultural setting, then, the critical inquiry when ascertaining liability under private nuisance will generally be whether the agriculturalist's invasion of his neighbor's property interest is unreasonable. To answer this question, the court must determine the reasonableness of the defendant's use by balancing conflicting policies and equities in light of the facts of each case. For this reason, it has been difficult to infer general rules of liability from the cases and to predict the results in particular situations in advance of adjudication.

The *Restatement* defines as “unreasonable” an intentional interference with another's use and enjoyment of land where (1) “the gravity of

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37. RESTATEMENT (SECOND) OF TORTS § 821D (1979).

38. *Id.* §§ 821E, 822.

39. If a plaintiff has a fee simple or leasehold interest, he will have the requisite property interest. Proximate cause is easy to demonstrate because agricultural activities are generally open and discrete. *See, e.g.*, Schloesser, *supra* note 2 and cases cited therein.

40. RESTATEMENT (SECOND) OF TORTS § 822 (1979).

41. *Id.* § 825 (1979).



the harm outweighs the utility of the actor's conduct, or . . . (2) . . . the harm caused by the conduct is serious and the financial burden of compensating for this and similar harm to others would not make the continuation of the conduct not feasible."<sup>42</sup> The latter category encompasses those cases where it may be inappropriate to enjoin the offending activity, but it would be inequitable for the agriculturist not to compensate his neighbors for the harm they suffer because of his continued operations.<sup>43</sup>

In deciding whether the gravity of the harm to the plaintiff outweighs the utility of the defendant's activity, courts consider the degree of the harm, its duration, permanence, and character<sup>44</sup> and whether the nuisance would affect a reasonable person's health, property, or personal comfort.<sup>45</sup> The court also will consider three sets of correlated factors when weighing the relative gravity of the harm and the utility of the conduct: (1) the social value the law places on the type of use that has been invaded and on the primary purpose of the conduct alleged to be actionable; (2) the suitability of the two uses to the character of the locality; and (3) the burden on the plaintiff to avoid the harm and the practicability of the defendant's prevention or avoidance of the invasion.<sup>46</sup>

Over the years, the courts have recognized several defenses to a claim of nuisance.<sup>47</sup> For actions arising out of intentional and unreasonable interferences, one available defense is that the plaintiff "came to the nuisance," meaning that the activity causing a nuisance on the plaintiff's land had been in existence and operating when he bought or improved the land.<sup>48</sup> Coming to the nuisance, however, does not automatically bar recovery. The courts will generally take this factor into account when weighing the social utility of the defendant's conduct, but if the intrusion into the plaintiff's enjoyment of his land is too severe, the defendant's activity still may subject him to liability in nuisance.<sup>49</sup> Moreover, express authorization of a particular nuisance-generating use by a zoning ordinance or applicable police power regu-

42. *Id.* § 826.

43. *See, e.g.*, *Boomer v. Atlantic Cement Co.*, 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970).

44. RESTATEMENT (SECOND) OF TORTS § 827 comment c (1979).

45. *Id.* § 827 comment d; *see also* *Arbor Theatre Corp. v. Campbell Soup Co.*, 11 Ill. App. 3d 89, 296 N.E.2d 11 (1973); *Kriener v. Turkey Valley Community School Dist.*, 212 N.W.2d 526, 536 (Iowa 1973).

46. RESTATEMENT (SECOND) OF TORTS §§ 827-28 (1979).

47. *See, e.g., id.* §§ 840B-C (contributory negligence and assumption of risk).

48. *Id.* § 840D. *See* *Dill v. Excel Packing Co.*, 183 Kan. 513, 331 P.2d 539 (1958); *Arbor Theatre Corp. v. Campbell Soup Co.*, 11 Ill. App. 3d 89, 296 N.E.2d 11 (1973); *Spur Industries, Inc. v. Del E. Webb Development Co.*, 108 Ariz. 178, 494 P.2d 700 (1972).

49. Most of the right-to-farm laws, *see infra* text accompanying notes 197-302, limit the time within which later purchasers may bring nuisance suits, thus strengthening the position of the farmer who was there first.

lation does not always shield the use against a nuisance complaint.<sup>50</sup>

### B. Remedies

When a landowner demonstrates that his neighbor is liable in nuisance, he often will seek both damages for past injuries and injunctive relief against any continuing invasions. Damages may include compensation for the reduction in rental value of the property for the duration of the nuisance, for physical damage to the property, and for the inhabitants' personal discomfort or sickness.<sup>51</sup>

If the plaintiff can show the inadequacy of his remedy at law, clean hands, no laches, and a threat of irreparable injury, he may secure a temporary or permanent injunction against the nuisance. Courts, however, generally tailor these injunctions to the circumstances of each case in order to minimize the interference with the defendant's activities while protecting the plaintiff's interest. For instance, in some agricultural nuisance cases courts have declined to force defendants to cease operations, but have nonetheless required them to operate their facilities in a manner that does not produce the nuisance on the plaintiff's property.<sup>52</sup>

Occasionally a court will refuse to grant an injunction because of a social policy favoring the particular activity involved. In such cases, the sole remedy available is money damages. For example, in *Boomer v. Atlantic Cement Co., Inc.*,<sup>53</sup> the New York Court of Appeals found that the defendant's operation of a cement plant constituted an actionable nuisance and ordered payment of damages,<sup>54</sup> but declined to enjoin continued operation of the plant. In denying the injunction, the court stressed, first, the cement industry's importance to society generally and, second, the defendant's inability to develop economically feasible and technologically effective pollution control equipment to prevent the nuisance.<sup>55</sup> The Iowa Supreme Court manifested a similar view with respect to a nuisance arising from egg production operations.<sup>56</sup>

One of the leading agricultural nuisance cases, *Spur Industries, Inc. v. Del E. Webb Development Co.*,<sup>57</sup> presents an interesting remedial solution. Webb developed Sun City, a large retirement community 15

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50. RESTATEMENT (SECOND) OF TORTS § 821B (1979).

51. See RESTATEMENT (SECOND) OF TORTS §§ 905 comment b, 929, 929 comment d (1979); *Yeager and Sullivan, Inc. v. O'Neill*, 163 Ind. App. 466, 324 N.E.2d 846 (1975).

52. See, e.g., *Fortin v. Vitali*, 28 Mich. App. 565, 184 N.W.2d 609 (1970); *Schiller v. Raley*, 405 S.W.2d 446 (Tex. Civ. App. 1966); *Gerrish v. Wishbone Farm of New Hampshire, Inc.*, 108 N.H.2d 237, 231 A.2d 622 (1967).

53. 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970).

54. *Id.* at 228, 257 N.E.2d at 875, 309 N.Y.S.2d at 319.

55. *Id.* at 225-26, 257 N.E.2d at 873, 309 N.Y.S.2d at 316-17.

56. *Patz v. Farmegg Products, Inc.*, 196 N.W.2d 557 (Iowa 1972).

57. 108 Ariz. 178, 494 P.2d 700 (1972).

miles west of Phoenix, Arizona.<sup>58</sup> Nearby, Spur Industries operated cattle feedlots having a capacity of 20,000 to 30,000 head.<sup>59</sup> Webb could not market homes near the feedlots because of the odor and flies,<sup>60</sup> and therefore brought a private action based on public nuisance.<sup>61</sup> The trial court found for Webb and permanently enjoined the feedlot operation. The Arizona Supreme Court affirmed, but held that Webb must indemnify Spur for the reasonable cost either of moving the feedlot elsewhere or of shutting it down.<sup>62</sup> The court reasoned that since Webb knowingly had brought the population into a previously agricultural area, thus necessitating the injunction against Spur's lawful business, Webb should bear the costs of the upheaval for which Spur had no adequate relief.<sup>63</sup> The court sought thereby to impose on the developer a more accurate assessment of the costs of his intrusion into a previously agricultural area.

*C. Common Law Nuisance as a Control Over  
Agricultural Pollution*<sup>64</sup>

The utility of judicially-enforced private nuisance law as a means of controlling agricultural pollution varies with the stage of development of the particular geographic area. In an area which is thoroughly rural, nuisance law gives the individual landowner a remedy for harm caused by a neighbor who uses his land in an unreasonable manner. This approach has the distinct advantage of being congruent with landowners' expectations, conserves property values, and preserves the *status quo* against intrusions by inappropriate uses. In an area that is undergoing suburbanization, however, it may be unfair to place sole reliance on the law of private nuisance to allocate the costs and benefits of change. Farmers who have already invested considerable resources in plant and equipment are subject to the continuing risk that their

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58. *Id.* at 180, 494 P.2d at 702.

59. *Id.* at 183, 494 P.2d at 705.

60. *Id.*

61. Public nuisance is "an unreasonable interference with a right common to the general public." RESTATEMENT (SECOND) OF TORTS § 821B (1979). *Spur Industries* was brought as a private action based on public nuisance because Webb was able to show that it had suffered particular harm over and above that experienced by the general public. 108 Ariz. at 183, 494 P.2d at 705. Even though the case was really a public nuisance action rather than a private nuisance action, the remedy developed by the court can be easily applied to private nuisance cases.

62. *Id.* at 179, 494 P.2d at 701.

63. *Id.* at 185, 494 P.2d at 707.

64. A careful search of reported appellate decisions from 1966-81 produced 37 private and six public nuisance actions involving the externalities from various agricultural operations. While these cases do not constitute a statistically valid sample of all the nuisance actions brought during the period, they indicate that most of the serious complaints about farming concern concentrated animal feeding operations.

lawful operation will be converted by subsequent development into a private nuisance vulnerable to injunction.

The strengths and weaknesses of private nuisance law as a technique for managing agricultural pollution tend to be opposite sides of the same coin. Thus, one of the main strengths of nuisance law is its case-by-case approach, which permits considerable flexibility and sensitivity both in discerning the right to relief and in fashioning the remedy. Where damages are inadequate to compensate the plaintiff fully, the court can tailor injunctive relief so as to protect the plaintiff's rights without unduly burdening the defendant's use of his land. A legislature, working before the fact and drafting statutes in general terms so as to apply to the myriad of situations likely to arise in the future, will almost never provide such customized solutions. At the same time, the *ad hoc* approach is inimical to the application of any broad plan for development in urban fringe areas. Since judicial action is almost always corrective rather than preventive, the outcome with regard to a particular farm is often unpredictable, especially since changing conditions may legitimate a nuisance-producing activity or turn a proper land use into an actionable nuisance.

Another of the strengths of the law of private nuisance as a land use control is that it is invoked by individuals. The weight, power, and resources of the state will be called into play only with respect to those uses that are sufficiently antagonistic to make an individual willing to expend the time, money, and effort to prosecute an action. Furthermore, a system of control based on litigation gives an individual the right to governmental assistance in gaining resolution of his problem without the need to stir what may be a very stolid and phlegmatic bureaucracy to action. At the same time, a weakness inherent in this aspect of the remedy is that, because it often requires expenditures of large amounts of money and energy, it will not be available to everyone injured by nuisances. Furthermore, by focusing on the rights of a few individuals rather than the interests of the population of an entire region, courts may well fail to give sufficient attention to the broader public interest at stake. Thus, private nuisance law, standing alone, is not an adequate tool for managing agricultural pollution, and to give adequate attention to the needs of the public, legislative intervention is needed. The current extent of such intervention is the subject of the next two parts of this Article.

### III

#### TECHNOLOGY-FORCING REGULATION

##### *A. Introduction*

As a result of the awakening of interest in environmental protec-

tion during the late sixties and early seventies, governmental responsibility for environmental protection shifted to the federal government. Congress assigned primary responsibility for establishing and administering environmental standards to the United States Environmental Protection Agency (EPA), leaving the states the option to assume responsibility if they could show EPA that they possessed both the authority and willingness to protect the environment effectively.<sup>65</sup>

Congress created a complex federal-state-local environmental management scheme, with Congress or EPA usually establishing the standards and EPA or state environmental protection agencies charged with enforcement.<sup>66</sup> While Congress did not entirely preempt state and local regulation, it generally left fairly narrow latitude for state regulatory efforts.<sup>67</sup>

## *B. The Principal Federal Environmental Laws Affecting Agriculture*

### *1. The Clean Water Act*

#### *a. General Structure*

The Federal Water Pollution Control Act (FWPCA) Amendments of 1972<sup>68</sup> created the current general framework for managing the nation's efforts to reduce water pollution. The Act has had significant, although difficult to quantify, impacts on agriculture. First, it established stringent water quality standards.<sup>69</sup> Second, it directly affects farming through its new programs for controlling both point source and non-point source agricultural pollution arising from animal wastes, sedimentation, fertilizers, crop residues, agricultural product processing wastes, insecticides, fungicides, and herbicides.<sup>70</sup>

The three elements of the FWPCA Amendments that most directly affect agriculture are: (1) the section 402 National Pollutant Discharge Elimination System (NPDES) permit program, with its effluent

65. See, e.g., Clean Water Act of 1977, 33 U.S.C. §§ 1251-1376 (Supp. V 1981); Clean Air Act, 42 U.S.C. §§ 7401-7642 (1976 & Supp. V 1981); Resources Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901-86 (1976 & Supp. V 1981); National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-47 (1976); Safe Drinking Water Act, 42 U.S.C. §§ 300f to 300j-10 (1976 & Supp. V 1981); Coastal Zone Management Act of 1972, 16 U.S.C. §§ 1451-1464 (1976 & Supp. V 1981); Federal Environmental Pesticide Control Act of 1972, 7 U.S.C. §§ 136-136y (1982); Toxic Substances Control Act, 15 U.S.C. §§ 2601-2629 (Supp. V 1981).

66. See *supra* note 65.

67. See *infra* text accompanying notes 206-219. Congress did leave the states power to establish more stringent standards. *Id.*

68. 33 U.S.C. §§ 1251-1376 (1976 & Supp. V 1981).

69. *Id.* § 1313 (1976 & Supp. V 1981).

70. *Id.* §§ 1288, 1342. For a more detailed analysis of the Act, its antecedents, and its applicability to agricultural pollution, see Beck, *Agricultural Water Pollution Control Law*, in 2 R. DAVIDSON, *AGRICULTURAL LAW* 141 (1981 & Supp. 1982); Montgomery, *Control of Agricultural Water Pollution: A Continuing Regulatory Dilemma*, 1976 U. ILL. L.F. 533.

guidelines and permit requirements for new and existing feedlots and agricultural products processors;<sup>71</sup> (2) the section 208 areawide waste treatment management program requiring state governments to develop effective means for reducing non-point source pollution;<sup>72</sup> and (3) the section 404 dredge and fill permit program affecting agricultural activities such as wetlands reclamation and the clearing of drainage ditches.<sup>73</sup>

In 1977, Congress conducted a comprehensive review of the FWPCA Amendments and, as part of the "mid-course correction" envisioned in 1972,<sup>74</sup> enacted the Clean Water Act of 1977.<sup>75</sup> Four major elements of the 1977 Act affect agriculture. First, the act authorized funds to support state management of the NPDES, construction grants, section 208, and section 404 programs.<sup>76</sup> Second, it exempted irrigation return flows from NPDES permit requirements and designated them as non-point source discharges to be covered by section 208 areawide waste treatment management plans.<sup>77</sup> Third, it created a new program for providing technical and financial assistance to farmers in order to implement section 208 areawide management programs. Under this program, the Secretary of Agriculture could provide funds for up to fifty percent of the costs of soil conservation and water pollution control practices calculated to reduce agricultural run-off.<sup>78</sup> In 1981, Congress terminated direct funding of section 208 and directed that it be funded from one percent of grants to states for waste water treatment plant construction.<sup>79</sup> Fourth, the Act gave the U.S. Army Corps of Engineers authority to issue general dredge and fill permits for classes of activities with minimal adverse environmental effects.<sup>80</sup> The Act also exempted from the section 404 permit requirement many normal farming and ranching activities, such as farm pond construction and irrigation ditch maintenance.<sup>81</sup>

Despite strong lobbying by agricultural interests, Congress refused

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71. 33 U.S.C. § 1342 (1976 & Supp. V 1981).

72. *Id.* § 1288.

73. *Id.* § 1344.

74. *See* S. REP. NO. 95-370, 95th Cong., 1st Sess. 1-2 (1977); 123 CONG. REC. S 39,170 (1977) (comments of Sen. Muskie).

75. Pub. L. No. 95-217, 91 Stat. 1566 (1978) (codified as amended at 33 U.S.C. §§ 1251-1376 (Supp. V 1981)).

76. 33 U.S.C. §§ 1251(b), 1285(g) (Supp. V 1981).

77. *Id.* § 1342(j), 1362(14). This portion of the amendments statutorily reversed the ruling in *Natural Resources Defense Council, Inc. v. Train*, 396 F. Supp. 1393 (D.D.C. 1975), *aff'd*, 568 F.2d 1369 (D.C. Cir. 1977).

78. Although never funded, this program served as a precursor to the Rural Clean Water Program created by the 1980 Agricultural Appropriations Act. Pub. L. No. 96-108, 93 Stat. 821, 835 (1980) (codified as amended at 33 U.S.C. § 1288(j)(1) (Supp. V 1981)).

79. 33 U.S.C. § 1285(j) (Supp. V 1981).

80. *Id.* § 1344(e).

81. *Id.* § 1344(f).

to limit the reach of the section 404 dredge and fill permit program to those waters traditionally known as "navigable waters"—"waters that are presently used or susceptible to use in their present condition or with reasonable improvement to transport interstate or foreign commerce."<sup>82</sup> Rather, Congress continued to utilize the very broad definition of "United States waters" as construed in *Natural Resources Defense Council, Inc. v. Callaway*.<sup>83</sup> The 1977 Amendments did provide, however, that if EPA approved, states could administer their own permit program for discharges into navigable waters other than traditional navigable waters.<sup>84</sup>

*b. Point Source Regulation: Feedlots*

Feedlot operations produce large amounts of urine, manure, and other organic materials which, in turn, produce biochemical oxygen demand, suspended solids, nitrates, ammonia, phosphorus, and coliform bacteria. To treat these wastes, most operations employ a combination of flushing facilities, lagoons, and secondary water treatment. The highly concentrated nature of the waste requires land application of effluents and solid residues through irrigation or spreading.<sup>85</sup>

NPDES permits must be obtained to discharge pollutants from point sources.<sup>86</sup> EPA's regulations specifically classify "concentrated animal feeding operations" as "point sources subject to the NPDES permit program."<sup>87</sup> A concentrated animal feeding operation is one where (1) animals will be confined and fed for a total of at least forty-five days and (2) vegetation is not sustained over any portions of the facility.<sup>88</sup> An operation is "concentrated" if it meets certain criteria relating to the type and number of animals confined.<sup>89</sup> The regulations divide confinement facilities into three categories. The first consists of those facilities that exceed the criteria set forth in 40 C.F.R. § 122.54,

82. H.R. CONF. REP. NO. 95-830, 95th Cong., 1st Sess. 97, reprinted in [1977] U.S. CODE CONG. & AD. NEWS 4424, 4472.

83. 392 F. Supp. 685 (D.D.C. 1975). This definition is coextensive with the reach of federal government powers. *Id.* at 686.

84. 33 U.S.C. § 1344(g) (Supp. V 1981).

85. 1 POLLUTION CONTROL GUIDE (CCH) 990. Much of this collection and treatment would occur anyway for health and sanitation reasons. *Id.* at 991.

86. 33 U.S.C. § 1342 (1976 & Supp. V 1981).

87. 40 C.F.R. § 122.54(a) (1982). These regulations are part of the consolidated permit requirements which also include regulations for the Hazardous Waste Management Program of the Resources Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901-86 (1976 & Supp. 1981); the Section 404 Dredge and Fill Program of the Clean Water Act, 33 U.S.C. § 1344 (1976 & Supp. V 1981); and the Prevention of Significant Deterioration Program of the Clean Air Act, 42 U.S.C. §§ 7470-91 (Supp. V 1981). 40 C.F.R. pt. 122, especially subpt. 19D.81 (1982).

88. 40 C.F.R. § 122.54(b)(1) (1982).

89. *Id.* § 122.54 (b)(3).

Appendix B, subsection (a).<sup>90</sup> Operation of these facilities requires a permit. The second category consists of facilities which meet the criteria set forth in subsection (b).<sup>91</sup> These operations require a permit only if they discharge directly into navigable waters. The third category of facilities covers those operations for which the EPA regional administrator (or the state director if the state is administering the program<sup>92</sup>)

90. An animal feeding operation is a concentrated animal feeding operation for purposes of § 122.54 if . . . the following criteria are met:

(a) More than the numbers of animals specified in any of the following categories are confined:

- (1) 1,000 slaughter and feeder cattle,
- (2) 700 mature and dairy cattle, (whether milked or dry cows),
- (3) 2,500 swine each weighing over 25 kilograms (approximately 55 pounds),
- (4) 500 horses,
- (5) 10,000 sheep or lambs,
- (6) 55,000 turkeys,
- (7) 100,000 laying hens or broilers (if the facility has continuous overflow watering),
- (8) 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
- (9) 5,000 ducks, or
- (10) 1,000 animal units. . . .

91. An animal feeding operation is a concentrated animal feeding operation for purposes of § 122.54 if . . .

(b) More than the following number and types of animals are confined:

- (1) 300 slaughter or feeder cattle,
- (2) 200 mature dairy cattle (whether milked or dry cows),
- (3) 750 swine each weighing over 25 kilograms (approximately 55 pounds),
- (4) 150 horses,
- (5) 3,000 sheep or lambs,
- (6) 16,500 turkeys,
- (7) 30,000 laying hens or broilers (if the facility has continuous overflow watering),
- (8) 9,000 laying hens or broilers (if the facility has a liquid manure handling system),
- (9) 1,500 ducks,
- (10) 300 animal units;

and either one of the following conditions are met: pollutants are discharged into navigable waters through a manmade ditch, flushing system or other similar manmade device; or pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

Provided, however, that no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25 year, 24-hour storm event.

The term "animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

The term "manmade" means constructed by man and used for the purpose of transporting wastes.

92. Between 35 and 40 states have assumed primary responsibility for administering the NPDES program. BUDGET FOR THE UNITED STATES, FISCAL YEAR 1983, app. 1-54 (1982). Their statutes and regulations set standards at least as high as those of the EPA guidelines and often cover smaller operations. See, e.g., IOWA DEPT. OF ENVIRONMENTAL QUALITY, RULES, tit. II (Water Quality), ch. 20 (Animal Feeding Operations) (1976), reprinted in ENV'T REP. (BNA) 776:0601; NEBRASKA DEPT. OF ENVIRONMENTAL CONTROL,



requires permits pursuant to 40 C.F.R. § 122.54(c).<sup>93</sup> The government may initiate criminal prosecution of those who discharge from a point source without a permit.<sup>94</sup>

EPA conditions approval of NPDES permits on compliance with applicable performance standards.<sup>95</sup> The Clean Water Act directed EPA to establish effluent limitations for existing feedlots and other agricultural point sources<sup>96</sup> and new source performance standards for facilities built after September 7, 1973.<sup>97</sup> The amended Act requires dischargers of "conventional pollutants . . . classified as biological oxygen demanding, suspended solids, fecal coliform, [and] pH,"<sup>98</sup> to use the "best practicable control technology currently available" (BPT)<sup>99</sup> now and "best conventional pollutant control technology" (BCT)<sup>100</sup> no later than July 1, 1984. The Act also requires dischargers of toxic substances to use BPT and the "best available technology economically achievable" (BAT) within three years of promulgation of applicable

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RULES AND REGULATIONS PERTAINING TO LIVESTOCK WASTE CONTROL (1979), *reprinted in* ENV'T REP. (BNA) 836:0581.

93. 40 C.F.R. § 122.54(c) (1982) provides:

(1) The Director may designate any animal feeding operation as a concentrated animal feeding operation upon determining that it is a significant contributor of pollution to the waters of the United States. In making this designation the Director shall consider the following factors:

(i) The size of the animal feeding operation and the amount of wastes reaching waters of the United States;

(ii) The location of the animal feeding operation relative to waters of the United States;

(iii) The means of conveyance of animal wastes and process waste waters into waters of the United States;

(iv) The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of animal wastes and process waste waters into waters of the United States; and

(v) Other relevant factors.

(2) No animal feeding operation with less than the numbers of animals set forth in Appendix B shall be designated as a concentrated animal feeding operation unless:

(i) Pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar manmade device; or

(ii) Pollutants are discharged directly into waters of the United States which originate outside of the facility and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

(3) A permit application shall not be required from a concentrated animal feeding operation designated under this paragraph until the Director has conducted an on-site inspection of the operation and determined that the operation should and could be regulated under the permit program.

94. *See, e.g.,* United States v. Frezzo Brothers, Inc., 602 F.2d 1123 (3rd Cir. 1979), *cert. denied*, 444 U.S. 1074 (1980), *reopened under* 28 U.S.C. § 2255 (1976), 642 F.2d 59 (3rd Cir. 1981).

95. 33 U.S.C. § 1342 (1976 & Supp. V 1981).

96. *Id.* § 1311(b)(2).

97. *Id.* §§ 1314(b), 1316(b)(1)(A).

98. *Id.* § 1314(a)(4) (Supp. V 1981).

99. *Id.* § 1311 (b)(1)(A).

100. *Id.* § 1311(b)(2)(E).

effluent limitations, but not later than July 1, 1987.<sup>101</sup>

Pursuant to the Act, EPA has promulgated effluent limitations guidelines for feedlots<sup>102</sup> and certain other agricultural processing industries.<sup>103</sup> The feedlot regulations apply to dairy, hog, horse, sheep, poultry, cattle, and duck confinement facilities with animal populations higher than specified sizes.<sup>104</sup> Feedlots<sup>105</sup> constructed prior to September 7, 1973,<sup>106</sup> other than those for ducks, and subject to the BPT requirement, must have storm water management facilities able to prevent both wastewater overflow and the overflow of precipitation from any storm with a return frequency less than a ten year, twenty-four hour rainfall event.<sup>107</sup> Similar feedlots subject to the BAT requirement must be designed to prevent any discharge from storms up to a twenty-five year, twenty-four hour frequency.<sup>108</sup> Parallel guidelines exist for duck feedlots.<sup>109</sup>

Only about 2,000 cattle feedlots—less than two percent of the nation's total<sup>110</sup>—are subject to NPDES review on grounds of size alone. Similarly, well under three percent of dairies, hog feedlots, and egg

101. *Id.* §§ 1311(b)(2)(A), (C)-(D).

102. 40 C.F.R. pt. 412 (1982).

103. Dairy Products, 40 C.F.R. pt. 405 (1982); Grain Mills, 40 C.F.R. pt. 406 (1982); Canned and Preserved Fruits and Fruits and Vegetables, 40 C.F.R. pt. 407 (1982); Canned and Preserved Seafood, 40 C.F.R. pt. 408 (1982); Sugar Processing, 40 C.F.R. pt. 409 (1982); Meat Products, 40 C.F.R. pt. 432 (1982).

104. 40 C.F.R. § 412.10 (1982) defines applicability as follows:

The provisions of this subpart are applicable to discharges of pollutants resulting from feedlots in the following subcategories: Beef cattle—open lots; beef cattle—housed lots; dairy cattle—stall barn (with milk room); dairy—free stall barn (with milking center); dairy—cowyards (with milking center); swine—open dirt or pasture lots; swine—housed, slotted floor; swine—solid concrete floor, open or housed lot; sheep—open lots; sheep—housed lots; horses—stables (race tracks); chickens—broilers, housed; chickens—layers (egg production), housed; chickens—layer, breeding or replacement stock, housed; turkeys—open lots; turkeys—housed; and for those feedlot operations within these subcategories as large or larger than the capacities given below: 1,000 slaughter steers and heifers; 700 mature dairy cattle (whether milkers or dry cows); 2,500 swine weighing over 55 pounds; 10,000 sheep; 55,000 turkeys; 100,000 laying hens or broilers when facility has unlimited continuous flow watering systems; 30,000 laying hens or broilers when facility has liquid manure handling system; 500 horses; and 1,000 animal units from a combination of slaughter steers and heifers, mature dairy cattle, swine over 55 pounds and sheep.

105. As defined in 40 C.F.R. § 412.11(b) (1982).

106. Feedlots constructed after September 7, 1973, are subject to new source performance standards which are identical to the BAT effluent guidelines. 40 C.F.R. § 412.17.25 (1982).

107. 40 C.F.R. § 412.12 (1982). *See also* 1 POLLUTION CONTROL GUIDE (CCH) 989-96. A 10 year, 24 hour rainfall is a storm that produces, in 24 hours, precipitation in an amount that would be expected to fall once every 10 years in a 24 hour period on the average. 40 C.F.R. § 412.11(c) (1982).

108. 40 C.F.R. § 412.17 (1982).

109. 40 C.F.R. § 412.20-.26 (1982).

110. These 1,880 feedlots, however, produce nearly 70% of fed cattle. *See* Martin, *supra* note 19, at 101; STATISTICAL REPORTING SERVICE, U.S. DEPT. OF AGRICULTURE, LIVESTOCK AND MEAT STATISTICS (STAT. BUL 522), SUPPLEMENT FOR 1980, at 55 (table).

factories are large enough to be subject to automatic NPDES review.<sup>111</sup> Somewhat higher percentages of broiler houses and turkey farms are covered.<sup>112</sup> In most cases, however, the regulations govern a much higher percentage of the animals marketed.<sup>113</sup> In 1976, the staff of the National Commission on Water Quality estimated the total per animal investment costs of meeting the new guidelines' higher standards for large beef cattle, hogs, and dairy cattle operations (in dry climates) to be approximately \$13, \$11, and \$48, respectively. It concluded that while the requirements might adversely affect a few small operators, "the overall impact on the entire feeding industry will be slight."<sup>114</sup>

*c. Non-point Source Section 208 Planning*

Water pollutant discharges that are not from point sources, such as run-off from farmland, irrigation return flows, and discharges from small feedlots not subject to NPDES permits, are classed as non-point sources. The Clean Water Act requires only that areawide waste treatment management planning, required by section 208, attempt to bring these non-point sources under control.<sup>115</sup> The Act requires several interrelated state planning efforts. First, section 209 required long-range regional resource management studies and development of plans for water and related land in every river basin in the country by 1980.<sup>116</sup> Second, section 303(e) establishes a continuing planning process for each river basin as a means of setting major priorities and objectives for pollution control.<sup>117</sup> Third, section 208 of the Act requires each state's governor to designate those areas within his state having significant water quality problems, and create for these areas a twenty-year areawide waste management program that will take an inventory of existing conditions, establish detailed water quality goals, and create the governmental management structure to implement the program.<sup>118</sup> In *Natural Resources Defense Counsel, Inc. v. Costle*,<sup>119</sup> the Court of Appeals for the D.C. Circuit held that state environmental protection agencies must carry out section 208 planning for all parts of their states,

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111. Forste & Frick, *supra* note 20, at 122; Rogers, *supra* note 19, at 152; U.S. DEPT. OF AGRICULTURE, ECONOMIC RESEARCH SERVICE, LIVESTOCK AND MEAT: OUTLOOK AND SITUATION 23 (Aug. 1982).

112. Rogers, *supra* note 19, at 152.

113. See *supra* note 110 and sources cited therein.

114. NCWQ STAFF REPORT, *supra* note 14, at II-165.

115. I J. JUERGENSMAYER & J. WADLEY, AGRICULTURAL LAW 576 (1982); 33 U.S.C. § 1288(b)(2)(F) (Supp. V 1981).

116. 33 U.S.C. § 1289 (1976), referring to the so-called "level B" plans of the Water Resources Planning Act. 42 U.S.C. §§ 1962 to 1962d-18 (1976 & Supp. V 1981).

117. 33 U.S.C. § 1313(e) (1976).

118. *Id.* § 1288.

119. 564 F.2d 573 (D.C. Cir. 1977).

including areas not designated as having special pollution problems.<sup>120</sup> Fourth, section 201 of the Act authorizes planning, design, and construction of individual sewage treatment plants,<sup>121</sup> and section 106 establishes criteria for applicants competing for waste-water treatment construction funds.<sup>122</sup> Congress' intention to coordinate water pollution control through these programs is evidenced partially by the fact that activities inconsistent with a section 208 plan are ineligible for waste-water treatment plant construction grants.<sup>123</sup>

Section 208's impact on agriculture has been the subject of considerable comment and evaluation.<sup>124</sup> In 1980, EPA sponsored a study of state agricultural non-point source water pollution programs. The study revealed that: (1) thirty-nine states had begun implementation of their section 208 programs;<sup>125</sup> (2) twenty-seven of those states relied on voluntary programs such as education, technical assistance, and information;<sup>126</sup> and the other twelve utilized some form of land management regulation requiring Best Management Practices;<sup>127</sup> (3) twenty-one states designated state soil and water conservation agencies or departments of agriculture as the managing agencies, sixteen states designated water pollution control agencies, three states designated their departments of natural resources, and nineteen states chose to utilize soil conservation districts either alone or in conjunction with a state agency;<sup>128</sup> (4) thirty states considered agricultural non-point source pollution a "significant" source of non-point pollution;<sup>129</sup> (5) forty states had designated (and thirty-three had ranked) areas where agricultural non-point source pollution was critical;<sup>130</sup> and (6) most states did not have the manpower they considered necessary to administer their section 208 programs and required federal cost-sharing assistance.<sup>131</sup>

120. *Id.* at 578.

121. 33 U.S.C. § 1281 (1976 & Supp. V 1981).

122. *Id.* § 1256(f)(1) (1976).

123. *Id.* § 1281(g) (1976 & Supp. V 1981).

124. Beck, *supra* note 70, at 215-35; Schloesser, *supra* note 2; Uchtmann & Seitz, *supra* note 8; Note, *A Procedural Framework for Implementing Non-point Source Water Pollution Control in Iowa*, 63 IOWA L. REV. 184 (1977); Pimentel & Pimentel, *Ecological Aspects of Agricultural Policy*, 20 NAT. RESOURCES J. 55 (1980); Hines, *Farmers, Feedlots and Federalism: The Impact of the 1972 Federal Water Pollution Control Act Amendments on Agriculture*, 19 S.D.L. REV. 540 (1974).

125. OFFICE OF WATER AND WASTE MANAGEMENT, U.S. ENVIRONMENTAL PROTECTION AGENCY, IMPLEMENTATION STATUS OF STATE 208 AGRICULTURAL PROGRAMS (draft) 2 (Sept. 1980).

126. *Id.*

127. The twelve states were Maine, Massachusetts, Pennsylvania, Illinois, Michigan, Ohio, Iowa, Montana, South Dakota, Hawaii, New York (with no enforcement provision), and California (water rights regulation). *Id.* at chart I.

128. *Id.* at 2.

129. *Id.*

130. *Id.* at 3.

131. *Id.*

Since EPA approved most states' section 208 plans after 1978, and since these plans relied heavily on voluntary implementation methods, there exists to date little evidence that they have had any significant impact on agricultural non-point source pollution. The EPA's guidelines on Best Management Practices stress erosion control as the principal means of controlling non-point source pollution,<sup>132</sup> but also suggest that state programs include integrated pest management, conservation tillage, vegetative cover of bare ground, conservation cropping systems, and animal management systems.<sup>133</sup> Few local governments, however, have instituted strong regulatory programs to control agricultural runoff and erosion.<sup>134</sup> A 1981 analysis of 136 section 208 plans found that many proposed initial voluntary compliance periods, to be followed by stronger regulatory approaches if voluntary efforts failed.<sup>135</sup> In this era of budgetary cutbacks and deregulation, it is impossible to forecast whether state and local governments—working in cooperation with farmers—will marshal both the resources and the will to control agricultural non-point source pollution more effectively.

*d. Section 404 Dredge and Fill Permits*

Section 404 of the FWPCA<sup>136</sup> requires that dischargers obtain a permit from the U.S. Army Corps of Engineers before discharging any dredged or fill material into United States "navigable waters."<sup>137</sup> The Conference Report on the Act<sup>138</sup> stated that when Congress defined "navigable waters" as "the waters of the United States, including the territorial seas,"<sup>139</sup> it intended to assert jurisdiction over all those waters it could regulate under the Interstate Commerce Clause of the Constitution.<sup>140</sup> Despite Congress' expressed intent, however, the Army Corps of Engineers assumed jurisdiction only over waters traditionally defined as "navigable,"<sup>141</sup> a more narrow definition than that allowable under the Commerce Clause.

In 1975, a federal district court ordered the Corps to reinterpret its

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132. U.S. ENVIRONMENTAL PROTECTION AGENCY, GUIDELINES FOR STATE AND AREA-WIDE WATER QUALITY MANAGEMENT PROGRAM DEVELOPMENT app. 4 (1976); 40 C.F.R. § 35.1521-4(c)(1) (1982).

133. U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 132, at app. 4-5; Beck, *supra* note 70, at 228-29.

134. See R. Coughlin, *Regulatory Approaches by State and Local Governments for Reducing Erosion from Agricultural Lands: A report to the American Farmland Trust* (1983) (unpublished manuscript).

135. Beck, *supra* note 70, at 225, 227.

136. 33 U.S.C. § 1344 (Supp. V 1981).

137. *Id.* § 1344(a).

138. S. REP. NO. 1236, 92d Cong., 2d Sess. 144 (1972).

139. 33 U.S.C. § 1362(7) (1976).

140. U.S. CONST. art. I, § 8, cl. 3.

141. *I.e.*, those waters below the ordinary high water mark in fresh water and below the mean high water in tidal waters. Blumm, *supra* note 29, at 416.

section 404 jurisdiction to encompass the full reach of the Commerce Clause.<sup>142</sup> The Corps then proposed interim regulations<sup>143</sup> which raised the spectre of federal regulation of farm ponds, irrigation ditch digging, and plowing.<sup>144</sup> The furor over this perceived intrusion into the domain of private property and local land use control continues today, even though Congress in 1977 created significant exemptions from the section 404 permit requirements.<sup>145</sup>

The 1977 Amendments to the Clean Water Act preserved the broad jurisdiction of the Army Corps of Engineers, but exempted six categories of activities having only minor effects on water quality. The categories include normal farming, silviculture, and ranching activities; farm and stock ponds or irrigation ditch construction or maintenance; farm or forest road construction or maintenance according to prescribed best management practices; and activities regulated by state-wide programs approved under section 208(b)(4) for control of minor discharges through best management practices.<sup>146</sup>

Additionally, the 1977 amendments authorized the Corps of Engineers to issue dredge and fill "general permits" to exempt from individual permit requirements several broad classes of activities having only minimally adverse impacts on water quality,<sup>147</sup> even though the Corps had published little information on these programs.<sup>148</sup> Finally, the 1977 Amendments authorized EPA to approve state section 404 programs for waters that do not fall within the traditional definition of navigability.<sup>149</sup>

The Corps of Engineers published its Interim Final Rules for section 404 permits in July 1982.<sup>150</sup> The rules exempt normal farming, silviculture, and ranching activities (plowing, seeding, cultivation, minor drainage, and harvesting) where they are part of an established operation, but not activities that "bring an area into farming or ranching use . . .," including modifications of the hydrological regime necessary to bring back into production land idled for a long period of

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142. Natural Resources Defense Council, Inc. v. Calloway, 392 F. Supp. 685 (D.D.C. 1975).

143. 40 Fed. Reg. 31,320 (1975). Final regulations were adopted in 1977. 33 C.F.R. § 323.3(a)(4) (1982).

144. *Hearings on the Federal Water Pollution Control Act Amendment of 1977 Before the Senate Committee on Environment and Public Works*, 95th Cong., 1st Sess. 517-20 (1977).

145. *See infra* note 146-149 and accompanying text.

146. 33 U.S.C. § 1344(f)(1) (Supp. V 1981).

147. *Id.* § 1344(e)(1).

148. Blumm, *supra* note 29, at 431-32.

149. 33 U.S.C. § 1344(g)-(h) (Supp. V 1981). Presumably the states had valid regulatory power over activities that were exempt from Section 404 prior to 1977. Blumm, *supra* note 29, at 455.

150. 47 Fed. Reg. 31,794-834 (1982) (to be codified at 33 C.F.R. pts. 320-30).

time.<sup>151</sup> If EPA approves a state's section 404 program, the state may incorporate that program into its section 208 program.<sup>152</sup> This procedure significantly simplifies the approval process.

## 2. *The Federal Insecticide, Fungicide, and Rodenticide Act*

The Federal Insecticide, Fungicide, and Rodenticide Act of 1947 (FIFRA), as amended in 1972,<sup>153</sup> is the centerpiece of current federal efforts to protect applicators, farm labor, and consumers against injury caused by pesticides. FIFRA mandates registration and approval by EPA prior to use of any pesticide,<sup>154</sup> sets labelling and applicator licensing requirements,<sup>155</sup> and makes improper use of pesticides a misdemeanor.<sup>156</sup> The Act further authorizes the Agency to protect farm workers by issuing standards governing when fields may be re-entered following pesticide application.<sup>157</sup>

FIFRA authorizes EPA to suspend or cancel the registration of pesticides that it determines have "unreasonable adverse effects on the environment."<sup>158</sup> To date, the Agency has suspended or cancelled the registration of pesticides containing DDT, dieldrin, aldrin, chlordane, heptachlor, mercury, kepone, chlorobenzilate, endrin, DBCP, and 2, 4, and 5-T silvex.<sup>159</sup> EPA estimates show that the economic costs of these cancellations are relatively minor, especially when compared to the estimated half-trillion dollar cost of pollution abatement programs in the United States during the period from 1978 to 1987.<sup>160</sup>

As a result of its registration and licensing requirements, FIFRA and the state regulatory programs it envisages principally affect pesticide manufacturers and commercial applicators. A particular farmer will fall within the Act if he hires an applicator who uses pesticides in violation of the law.<sup>161</sup> The Act also may set or influence the rules of liability to which farmers may be held accountable in private litigation by persons claiming injury from pesticides. Applicators—whether in-

151. 40 C.F.R. § 123.92 (1982). See 45 Fed. Reg. 33,290, 33,397-400 (1980) for an evaluation of the farming provisions of these regulations.

152. 33 U.S.C. § 1288(b)(4)(B) (Supp. V 1981).

153. 7 U.S.C. §§ 136-136y (1982).

154. *Id.* § 136a.

155. *Id.* § 136a, 136b.

156. *Id.* § 136j, 136 l.

157. *Organized Migrants in Community Action, Inc. v. Brennan*, 520 F.2d 1161 (D.C. Cir. 1975).

158. 7 U.S.C. § 136a(c)(6) (1982). See Spector, *Regulation of Pesticides by the Environmental Protection Agency*, 5 *ECOLOGY L.Q.* 233 (1975); 2 J. JUERGENSMEYER & J. WADLEY, *supra* note 115, at 50-54; 40 C.F.R. § 1502.22 (1982).

159. OFFICE OF PESTICIDE PROGRAMS, U.S. ENVIRONMENTAL PROTECTION AGENCY, *EPA PESTICIDE CANCELLATIONS/SUSPENSIONS: A SURVEY OF ECONOMIC IMPACTS* (1980).

160. REGULATORY IMPACT ANALYSIS, *supra* note 18, at 2.

161. See *United States v. Corbin Farm Service*, 444 F. Supp. 510 (E.D. Cal), *aff'd*, 578 F.2d 279 (9th Cir. 1978).

dependent commercial contractors or licensed farmers—may be liable on one of several theories, depending on relevant principles of state law:<sup>162</sup> strict liability arising out of an abnormally dangerous activity,<sup>163</sup> negligence,<sup>164</sup> or trespass.<sup>165</sup>

### 3. *The Clean Air Act*

Under the regulatory regime created by the Clean Air Act Amendments of 1970,<sup>166</sup> the states retain almost complete responsibility for control of agricultural air pollution. Although EPA sets national ambient air quality standards<sup>167</sup> and provides supervision and technical assistance, the states are primarily responsible for regulating pollution-creating activities so as to meet the Agency's standards.<sup>168</sup> Required State Implementation Plans may incorporate flexible strategies developed through long-range, comprehensive planning processes and may take into account economic and social, as well as environmental, objectives.<sup>169</sup>

One significant source of agricultural air pollution regulated by several states is the open burning of agricultural wastes. California, for instance, has adopted detailed regulations that prohibit open burning unless the owner has obtained a permit.<sup>170</sup> New Jersey also requires a permit for agricultural burning,<sup>171</sup> while Colorado,<sup>172</sup> Texas,<sup>173</sup> Virginia,<sup>174</sup> and Iowa<sup>175</sup> exempt such burnings from their general prohibition against open burning. Nebraska prohibits open fires except those incident to agricultural operations where no nuisance or traffic hazard

162. See 2 J. JUERGENSMEYER & J. WADLEY, *supra* note 115, at 60-70; Annot., 37 A.L.R.3d 833 (1971).

163. See, e.g., *Langan v. Valicopters, Inc.*, 88 Wash. 2d 855, 567 P.2d 218 (1977).

164. See, e.g., *Binder v. Perkins*, 213 Kan. 365, 516 P.2d 1012 (1973).

165. See, e.g., *Shronk v. Gilliam*, 380 S.W.2d 743 (Tex. Civ. App. 1964).

166. 42 U.S.C. §§ 7401-7642 (Supp. V 1981).

167. *Id.* § 7409.

168. *Id.* § 7410.

169. 123 CONG. REC. S 26,851 (1977) (statement of Sen. Stafford); *id.* at S 26,852 (statement of Sen. Randolph).

170. CAL. HEALTH & SAFETY CODE §§ 41850-64 (West 1979 & Supp. 1983), reprinted in ENV'T REP. (BNA) 321:0124; CAL. ADMIN. CODE tit. 17, §§ 80100-300 (1983) (Agricultural Burning Guidelines), reprinted in ENV'T REP. (BNA) 321:0508

171. N.J. ADMIN. CODE tit. 7, §§ 7.27-2.1 to .13 (1981), reprinted in ENV'T REP. (BNA) 451:0502.

172. COLO. REV. STAT. § 25-7-109 (1973); CODE COLO. REG. pt. 1, Reg. No. 1, § II.C.1.d (1983), reprinted in ENV'T REP. (BNA) 326:0513

173. TEX. ADMIN. CODE tit. 31, § 111.2(6) (1982), reprinted in ENV'T REP. (BNA) 521:0541.

174. VA. STATE AIR POLLUTION CONTROL BD. REGS. app. D (Forest Management and Agricultural Practices) (1983), reprinted in ENV'T REP. (BNA) 536:0570.

175. IOWA DEPT. RULES, div. 400 (Environmental Quality Dept.), tit. I, ch. 3, § 4.2(3) (1982), reprinted in ENV'T REP. (BNA) 376:0511.



is created.<sup>176</sup>

Frost protection heaters are another source of agricultural air pollution. California,<sup>177</sup> Florida,<sup>178</sup> and Maryland<sup>179</sup> require that owners of orchards and citrus groves use only state-approved frost protection heaters that do not produce more than one gram per minute of unconsumed carbonaceous material.

Feedlot odors have not escaped regulation. Iowa forbids emissions of odorous substances that are "of such frequency, duration, quality and intensity as to be harmful to human health and welfare,"<sup>180</sup> and has adopted special regulations governing anaerobic lagoons on animal feedlots.<sup>181</sup>

Agricultural activities may also harm air quality by generating large quantities of fugitive dust. Colorado in 1954 enacted the Soil Erosion and Dust Blowing Act<sup>182</sup> which requires landowners to implement cultivation techniques designed to minimize wind erosion. That state's Air Pollution Control Commission further requires feedlot owners to minimize dust from their operations.<sup>183</sup> Arizona simply requires farmers to take reasonable precautions to prevent generation of excessive amounts of airborne particulate matter.<sup>184</sup>

Although less publicized than the burdens of restrictive regulations, the positive impacts of the Clean Air Act's technology-forcing regulatory programs probably are more important to farmers. In his 1981 testimony before Congress, Paul Sacia of the National Farmers Union stated that air pollutants, such as sulfur dioxide and ozone, reduce crop productivity by as much as one to two percent nationwide, according to one estimate.<sup>185</sup> Unfortunately, more precise studies of the agricultural costs and benefits of regulating air pollution have not

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176. NEB. DEPT. OF ENVIR. CONTROL, AIR POLLUTION CONTROL RULES AND REGS., R. 11, §§ 1, 2(d) (1982), *reprinted in* ENV'T REP. (BNA) 436:0551.

177. CAL. HEALTH & SAFETY CODE § 41860 (West 1982), *reprinted in* ENV'T REP. (BNA) 321:0125.

178. FLA. DEPT. OF ENVIR. REG. RULES § 17-5.06 (1975), *reprinted in* ENV'T REP. (BNA) 346:0641.

179. MD. ADMIN. CODE tit. 10, § 10.18.20.04 (1982), *reprinted in* ENV'T REP. (BNA) 401:0533.

180. IOWA DEPT. RULES, div. 400 (Environmental Quality Dept.), tit. I, ch. 3, § 4.5(1) (1982), *reprinted in* ENV'T REP. (BNA) 376:0516.

181. *Id.* § 4.5(3).

182. COLO. REV. STAT. §§ 35-72-101 to -107 (1973 & Supp. 1982).

183. CODE COLO REGS., pt. 1, Reg. No. 1, § III.D.2.k (1983), *reprinted in* ENV'T REP. (BNA) 326:0518.

184. ARIZ. ADMIN. COMP. R. tit. 9, ch. 3, § R 9-3-409 (1982), *reprinted in* ENV'T REP. (BNA) 311:0523.

185. *Prevention of Significant Deterioration and Nonattainment [Clean Air Act]: Hearings Before the Subcomm. on Health and the Environment of the House Committee on Energy & Commerce, 97th Cong., 1st Sess. 784 (1981)* (statement of Paul Sacia, Legislative Assistant, National Farmers Union).

been made.<sup>186</sup>

#### 4. *The Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act of 1976, as amended,<sup>187</sup> is the major federal statute in the area of solid waste disposal. Although agricultural activities generate large amounts of solid waste,<sup>188</sup> little falls into the category of hazardous wastes.<sup>189</sup> Its disposal is therefore subject to the states' solid waste management plans.<sup>190</sup> Each state's management plan must identify the general strategies it has selected to protect the public against adverse effects of solid waste disposal, indicate how the state will provide adequate sanitary landfill capacity, and show that there are adequate institutional arrangements for implementing the strategies.<sup>191</sup> Some states, such as California,<sup>192</sup> require counties to prepare solid waste management plans that cover, among other materials, wastes resulting from the production and processing of agricultural products, including manure, prunings, and crop residue.<sup>193</sup> Some states exclude agricultural wastes from the requirements of their solid waste acts.<sup>194</sup> As of September 1, 1982, EPA had approved twenty State Solid Waste Management Plans and another twenty had been adopted by states and submitted to the Agency

186. Several studies have examined the macroeconomic effects on agriculture of federal environmental regulations. See, e.g., CHASE ECONOMETRIC ASSOCIATES, INC., *THE MACROECONOMIC IMPACTS OF FEDERAL POLLUTION CONTROL* (1975); Hollenback, *The Employment and Earnings Impacts of the Regulation of Stationary Source Air Pollution*, 6 J. ENVTL. ECON. & MGMT. 208 (1979). These studies are inconclusive, but had they taken non-market benefits into account, they may well have found that the impact of federal environmental laws on agriculture has been positive. See Portney, *The Macroeconomic Impacts of Federal Environmental Regulation*, 21 NAT. RESOURCES J. 459 (1981).

187. 42 U.S.C. §§ 6901-87 (1976 and Supp. V 1981).

188. In 1976, EPA estimated that between 1970 and 1974 agriculture produced 687 million tons (dry weight) of solid waste. STAFF OF SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE OF THE HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, 94TH CONG., 2D SESS., *MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976*, at 3 (Comm. Print 1976).

189. See 40 C.F.R. §§ 261.4(b)(2), 262.51 (1982).

190. These plans are prepared according to the EPA's Guidelines promulgated pursuant to 42 U.S.C. § 6942 (1976 and Supp. V 1981). See 40 C.F.R. § 256.02 (1982).

191. 40 C.F.R. §§ 256.01-.64 (1982).

192. CAL. GOVT. CODE §§ 66700-96 (West Supp. 1982).

193. CAL. ADMIN. CODE tit. 14, §§ 17129, 17131(a), 17225.3 (1978), reprinted in ENV'T REP (BNA) 1121.0504, .0508. The State's Agricultural Solid Waste Management Standards set general levels of performance that are to be met by agricultural operations with respect to disposal of manure, prevention of excessive odor, dust, feathers and excessive numbers of rodents, flies and other insects. The appropriate state, regional or county enforcement agency is empowered to inspect areas where agricultural wastes are stored and determine whether these levels have been exceeded. *Id.* §§ 17801-24.

194. See, e.g., COLO. REV. STAT. § 30-20-101(b) (1973); 401 KY. ADMIN. REGS. § 2:050 (1981), reprinted in ENV'T REP. (BNA) 1186.0505 (exempting agricultural wastes returned to the soil as fertilizers or soil conditioners).

for review.<sup>195</sup>

#### IV

##### LEGALIZATION: RIGHT-TO-FARM LAWS

###### *A. Introduction: The Major Concepts Embodied in Right-to-Farm Laws*

In recent years, forty-six state legislatures have adopted statutes intended to protect agricultural activities that would otherwise be subject to abatement through judicial enforcement of common law public or private nuisance principles or by administrative enforcement of local anti-nuisance ordinances.<sup>196</sup> The new statutes, referred to generically as "right-to-farm" laws, seek to accomplish one or both of the following objectives: (1) to strengthen the legal position of established farmers when they are sued in private nuisance by newly-arrived neighbors; and (2) to protect farmers against unreasonably restrictive local land-use controls, building codes, and anti-nuisance ordinances.

States enacted right-to-farm laws in response to a complex set of interrelated developments. First, many agricultural activities have increased both in scale and in degree of concentration so that activities conducted on relatively small acreages may generate levels of environmental pollution markedly higher than in the past.<sup>197</sup> Second, these activities have become subject to a higher degree of government regulation.<sup>198</sup> Third, suburbanization of rural areas has brought large numbers of non-farmer residents to many of the nation's most productive agricultural areas.<sup>199</sup> These newcomers often have found the smell, noise, and other externalities of farming to be unacceptable. Finally, farmers have come to fear that they will lose nuisance suits even where they have operated for many years without objection and have complied—often at great expense—with applicable federal and state regulations. These fears are often justified because under the principles of common law private nuisance an activity can be enjoined even though it may be authorized by relevant statutes and ordinances.<sup>200</sup> Moreover, a non-farming newcomer might prevail in a nuisance action despite the fact that he "came to the nuisance."<sup>201</sup>

While the statutes enacted in response to these developments vary, often significantly, from state to state, most fall into one of three major

195. Letter from James F. Michael, State Programs Branch, Office of Solid Waste, U.S. Environmental Protection Agency, to the author (Sept. 16, 1982).

196. See *infra* notes 223, 261-267, 274-278, 285-288, 291-296, and 297-300.

197. See *supra* notes 10-32 and accompanying text.

198. See *supra* notes 65-195 and accompanying text.

199. See *supra* note 2.

200. RESTATEMENT (SECOND) OF TORTS § 821B (1979).

201. See *supra* notes 48-50 and accompanying text.

analytical categories. The first and most widely used is the Alabama/North Carolina model, based on a 1915 Alabama statute<sup>202</sup> as modified and adopted by North Carolina in 1979.<sup>203</sup> North Carolina's right-to-farm law protects farming operations that were not nuisances when established against future private nuisance actions which allege that such operations have become nuisances solely because of changed conditions in the locality. Many statutes in this category also protect farmers against restrictive local regulations. The second category of right-to-farm laws is exemplified by New York's 1971 Agricultural Districts Law.<sup>204</sup> This statute forbids local governments from enacting unreasonable regulations affecting structures or practices on farms located in designated agricultural districts. The third type of law, exemplified by Washington's right-to-farm law,<sup>205</sup> provides that where an agricultural activity is conducted in conformity with federal, state, and local laws, it is presumed to be reasonable and therefore not a nuisance. The final category of statutes includes miscellaneous laws that do not fit into any of the first three categories. The discussion that follows will analyze the major provisions of each type of right-to-farm law and examine the legal and public policy issues presented.<sup>206</sup>

*B. A Preliminary Issue: Have Federal Environmental Laws  
Preempted State Regulations and Common Law?*

The implementation of state right-to-farm laws may raise the question of federal preemption in some cases. The United States Supreme Court has enunciated several principles governing federal-state preemption questions. First, the Court has held that "the historic police powers of the states were not to be superseded by [a] Federal Act unless that was the clear intent of Congress."<sup>207</sup> This intent may be stated explicitly in the statute,<sup>208</sup> or it may be inferred from the pervasiveness of the scheme of federal regulation, the dominance of the federal interest in the particular field of regulation, or the purpose of the federal law and the character of obligations imposed.<sup>209</sup> Evidence of an intent to preempt state law must be clearer and more persuasive

202. 1915 Ala. Acts 691 (codified as amended at ALA. CODE § 6-5-127 (Supp. 1982)).

203. N.C. GEN. STAT. §§ 106-700 to -701 (Supp. 1981).

204. N.Y. AGRIC. & MKTS. LAW § 300-309 (McKinney 1972 & Supp. 1982).

205. WASH. REV. STAT. ANN. §§ 7.48.300-.310 (Supp. 1983).

206. See also Grossman & Fischer, *Protecting the Right to Farm: Statutory Limits on Nuisance Actions Against Farmers*, 1983 WIS. L. REV. 95.

207. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 157 (1978).

208. See, e.g., the Federal Pesticide Act of 1978, 7 U.S.C. § 136v (1982); the Noise Control Act of 1972, 42 U.S.C. § 4905(e)(1)(A) (1976); and the Toxic Substances Control Act, 15 U.S.C. § 2617 (1976 & Supp. V 1981), which explicitly prohibit any state or local government from setting standards for new products covered by the federal acts that are not identical to those established by the EPA.

209. *Rich v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947).

than that required to show an intent to displace federal common law with federal legislation.<sup>210</sup>

Many of the federal environmental protection laws—the Clean Water Act,<sup>211</sup> the Clean Air Act,<sup>212</sup> the Resource Conservation and Recovery Act,<sup>213</sup> the Safe Drinking Water Act,<sup>214</sup> and the Surface Mining Control and Reclamation Act<sup>215</sup>—expressly do not preclude state and local governments from adopting emission and discharge standards or pollution control requirements that are as strict as or stricter than the applicable federal requirements. Moreover, the Clean Water Act apparently provides for the preservation of state common law actions. The Senate Report accompanying the 1972 amendments to the act specifically noted that “[c]ompliance with requirements under [the] Act would not be a defense to a common law action for pollution damages.”<sup>216</sup>

The question of whether federal law preempts state agricultural pollution control laws thus depends on the effects of both the state law and the federal statute concerned, the language of the federal statute, and the intent of Congress. The major federal statutory schemes, such as the Clean Air Act and the Clean Water Act, envision the continuing availability of state remedies that are at least as stringent as federal requirements.<sup>217</sup> Others, such as FIFRA<sup>218</sup> and the Toxic Substances Control Act,<sup>219</sup> provide for a much more preemptive federal posture.

### *C. The Categories of Right-to-Farm: An Analysis*

#### *1. The Alabama/North Carolina Model*

##### *a. The Statute*

The Alabama/North Carolina model is derived from a 1915 Alabama statute which sought to protect industrial plants that were not

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210. *City of Milwaukee v. Illinois*, 451 U.S. 304, 316-17 (1981). In this case, the Supreme Court held that Congress had occupied the field of water pollution control through establishment of a comprehensive regulatory program, administered by EPA, and thereby had supplanted federal common law principles of nuisance. *Id.* at 317-19. *See also* *Middlesex Co. Sewerage Auth. v. National Sea Clammers Ass'n*, 453 U.S. 1, 22 (1981), where the Court reached the same conclusion with respect to the Marine Protection, Research and Sanctuaries Act of 1972, 33 U.S.C. §§ 1401-44 (1976 & Supp. V 1981).

211. 33 U.S.C. § 1370 (1976). *See* *Scott v. City of Hammond*, 519 F. Supp. 292, 298 (N.D. Ill. 1981).

212. 42 U.S.C. § 7416 (1976).

213. 42 U.S.C. § 6929 (Supp. V 1981).

214. 42 U.S.C. § 300g-3(e) (1976).

215. 30 U.S.C. §§ 1253, 1255 (Supp. V 1981).

216. S. REP. NO. 414, 92d Cong., 2d Sess. 81 (1971), *reprinted in* [1972] U.S. CODE CONG. & AD. NEWS 3668, 3746-47.

217. *See supra* notes 211-212.

218. 7 U.S.C. § 136v (1982).

219. 15 U.S.C. § 2617 (1976).

nuisances when established from suits based solely on changed conditions in surrounding areas.<sup>220</sup> The Alabama legislature amended the 1915 act in 1978 to protect agricultural operations, facilities, and plants.<sup>221</sup> North Carolina added a paragraph setting forth legislative findings and a declaration of policy, plus a definition of "agricultural operation," thus producing the widely-copied model.<sup>222</sup>

The thirty-two state statutes modeled after the North Carolina

220. 1915 Ala. Acts 691 (codified as amended at ALA. CODE § 6-5-127 (Supp. 1982)). The Alabama "right to manufacture" law was passed in response to the Alabama Supreme Court's decision in *Shelby Iron Co. v. Greenlea*, 184 Ala. 496, 630 So. 470 (1913). The court held that a landowner has no right to build and operate a factory which would be a nuisance to the adjoining land and thus measurably control the uses to which the plaintiff's land might be put in the future. It could not, by the use of its own land, deprive the adjoining owner of the lawful use of his property. It was no defense that the defendant conducted his business with care and skill and with the best equipment available.

221. 1978 Ala. Acts 1967 (codified at ALA. CODE § 6-5-127 (Supp. 1982)).

222. N.C. GEN. STAT. §§ 106-700 to -701 (Supp. 1981). The statute provides as follows:

*Nuisance Liability of Agricultural Operations*

§ 106-700. Legislative determination and declaration of policy. It is the declared policy of the State to conserve and protect and encourage the development and improvement of its agricultural land for the production of food and other agricultural products. When nonagricultural land uses extend into agricultural areas, agricultural operations often become the subject of nuisance suits. As a result, agricultural operations are sometimes forced to cease operations. Many others are discouraged from making investments in farm improvements. It is the purpose of this Article to reduce the loss to the State of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to be a nuisance.

§ 106-701. When agricultural operation, etc., not constituted nuisance by changed conditions in locality.

(a) No agricultural operation or any of its appurtenances shall be or become a nuisance, private or public, by any changed conditions in or about the locality thereof after the same has been in operation for more than one year, when such operation was not a nuisance at the time the operation began, provided, that the provisions of this subsection shall not apply whenever a nuisance results from the negligent or improper operation of any such agricultural operation or its appurtenances.

(b) For the purposes of this Article, "agricultural operation" includes, without limitation, any facility for the production for commercial purposes of crops, livestock, poultry, livestock products, or poultry products.

(c) The provisions of subsection (a) shall not affect or defeat the right of any person, firm, or corporation to recover damages for any injuries or damages sustained by them on account of any pollution of, or change in conditions of, the waters of any stream or on the account of any overflow of lands of any such person, firm, or corporation.

(d) Any and all ordinances of any unit of local government now in effect or hereafter adopted that would make the operation of any such agricultural operation or its appurtenances a nuisance or providing for abatement hereof as a nuisance in the circumstance set forth in this section are and shall be null and void; provided, however, that the provisions of this subsection shall not apply whenever a nuisance results from the negligent or improper operation of any such agricultural operation or any of its appurtenances. Provided further, that the provisions of this subsection shall not apply whenever a nuisance results from an agricultural operation located within the corporate limits of any city at the time of enactment hereof.

(e) This section shall not be construed to invalidate any contracts heretofore made but insofar as contracts are concerned, it is only applicable to contracts and agreements to be made in the future.

law<sup>223</sup> possess two or more of the following fourteen provisions: (1) protection of a farming operation after one year's operation; (2) protection against both public and private nuisance actions; (3) protection only from nuisance liability resulting from changed conditions in the locality; (4) preservation of liability resulting from negligent operation; (5) protection only where the facility was not a nuisance at its inception; (6) a definition of protected agricultural activities; (7) preservation of liability for environmental pollution or changes in water flow; (8) insulation against local regulations declaring non-negligent operation a nuisance; (9) failure to protect operations located within an incorporated municipality; (10) preservation of the vitality of pre-existing contracts; (11) continuation of the farming operation's liability resulting from material changes in the nature or size of the operation; (12) preservation of liability for activities conducted in violation of federal, state, or local laws; (13) a definition of the established date of operation; and (14) protection only of farms located within agricultural districts. Table 1 shows which state statutes have which provisions; some have additional features of minor importance which have not been included.

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223. ALA. CODE § 6-5-127 (Supp. 1982); ARK. STAT ANN. §§ 34-120 to -126 (Supp. 1983); CAL. CIV. CODE § 3482.5 (West 1982); COLO. REV. STAT. §§ 35-3.5-101 to -103 (Cumm. Supp. 1982); CONN. GEN. STAT. ANN. § 19a-341 (1983); DEL. CODE ANN. tit. 3, § 1401 (Supp. 1982); FLA. STAT. ANN. § 823.14 (West Supp. 1983); GA. CODE ANN. § 72-107 (Supp. 1982); HAWAII REV. STAT. §§ 165.1-4 (Supp. 1982); IDAHO CODE §§ 22-4501 to -4504 (Supp. 1983); ILL. ANN. STAT. ch. 5, § 1101-03 (Smith-Hurd Supp. 1982); IND. CODE § 34-1-52-4 (1983); IOWA CODE ANN. ch. 93A, § 3.12 (West Supp. 1982); KY. REV. STAT. § 413.072 (Supp. 1982); LA. REV. STAT. ANN. tit. 51, § 1202 (Supp. 1982); MD. CTS. & JUD. PROC. CODE ANN. § 5-308 (Supp. 1982); MINN. STAT. ANN. § 561.19 (West Supp. 1982); MISS. CODE ANN. 95-3-29 (Supp. 1982); 1982 Mo. Laws 665; 1981 Mont. Laws ch. 123, 170; NEB. REV. STAT. § 2-4401 to -4404 (Cumm. Supp. 1982); N.H. REV. STAT. ANN. ch. 430-C (Supp. 1982); N.M. STAT. ANN. §§ 49-9-1 to -4 (1982 Repl. Pampl.); N.Y. PUB. HEALTH LAW § 1300-C (McKinney Supp. 1981); N.C. GEN. STAT. §§ 106-700 to -701 (Supp. 1981); N.D. CENT. CODE §§ 42-04-01 to -05 (Supp. 1981); PA. STAT ANN. tit. 3, §§ 951-57 (Purdon Supp. 1983); R.I. GEN. LAWS §§ 2-23-1 to -7 (Supp. 1983); S.C. CODE §§ 46-45-10 to -50 (Supp. 1982); TEX. AGRIC. CODE ANN. §§ 251.001-.004 (Vernon 1981); UTAH CODE ANN. § 78-38-7 to -8 (Supp. 1981); VA. CODE §§ 3.1-22.28 to -22.29 (1983).

Table 1  
ELEMENTS OF ALABAMA/NORTH CAROLINA TYPE LAWS

	Type of Provision*													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
North Carolina	x	x	x	x	x	x	x	x	x	x				
Virginia	x	x	x	x		x	x	x		x	x			
South Carolina	x	x	x	x	x	x	x	x	x					
North Dakota	x	x	x	x	x	x	x	x	x	x				
Arkansas	x	x	x		x	x	x	x		x	x			
Colorado	x	x	x	x	x	x		x	x	x	x			
Idaho	x	x	x	x	x	x		x	x					
Minnesota	6			x	x	x	x		x	x	x	x	x	
Kentucky	x	x	x	x	x	x	x	x						
Indiana	x	x	x	x	x	x					x			
New Mexico	x	x	x	x	x	x				x	x			
Utah	3	x	x	x	x	x	x	x			x			
Alabama	x	x	x	x	x		x	x		x				
Missouri	x	x	x	x	x	x	x		x					
Illinois	x	x	x	x	x	x	x							
Louisiana	x	x	x	x	x		x			x				
Maryland	x	x		x		x				x	x	x		
California	3	x	x	x	x	x	x	x						
Hawaii	x	x	x	x	x	x	x				x			x
New Hampshire	x	x	x	x	x	x	x					x		
Pennsylvania	x			x		x	x	x		x	x	x		



Table 1  
ELEMENTS OF ALABAMA/NORTH CAROLINA TYPE LAWS

	Type of Provision*													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Florida	x	x	x		x	x					x		x	
Iowa				x			x				x		x	x
Delaware	x	x	x	x								x		
Nebraska		x	x			x								
Mississippi	x	x			x	x					x		x	
Georgia	x	x	x											
Rhode Island		x		x		x	x	x				x		
Texas	x	x	x			x			x		x	x	x	
Connecticut	x	x		x							x	x		
Montana	1 day	x	x											
New York	1 day		x											

\*The numbers correspond to the number of the provision on the previous page.

b. *Analysis*

The following analysis first examines the fundamental question of the degree of protection a farmer actually receives from the Alabama/North Carolina-type statute. It then examines some of the numerous legal issues presented by such statutes.

The Alabama/North Carolina-type right-to-farm law is designed to protect an agricultural activity that, because of changed local conditions, would otherwise be declared a private nuisance. The statute protects, however, only a limited right. First, it does not limit actions based on a trespass theory, such as an action against a farming operation that produces particulate matter which is deposited on a neighbor's land.<sup>224</sup>

Second, the statute does not protect an agricultural activity that becomes a nuisance because of negligent or otherwise improper operation.<sup>225</sup> While the concept of "negligence" embodies established legal doctrines, it is not clear what the statute envisions as an "improper" operation. The word has no generally accepted meaning, although dictum in a 1929 Alabama Supreme Court decision construing Alabama's "right to manufacture" law may be enlightening. In *Martin Building Co. v. Imperial Laundry Co.*,<sup>226</sup> the defendant's eight-story-high smoke-stack emitted large quantities of black smoke that blew into plaintiff's nearby twelve-story office building three or four times daily. The court observed that if the defendant could abate the nuisance at a reasonable cost by using modern operating methods or installing pollution control devices, the failure to do so would constitute "negligent or improper operation" of the laundry, and defeat the laundry's statutory protection.<sup>227</sup>

Third, the Alabama/North Carolina model protects only those activities that fall within the statutory definition of "protected agricultural activities."<sup>228</sup> North Carolina's definition is fairly broad and seems to cover all commercial agricultural activities from raising crops to food processing and packaging.<sup>229</sup> Other definitions are more restrictive,<sup>230</sup> excluding not only non-commercial agricultural activities

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224. See, e.g., *Born v. Exxon Corp.*, 388 So. 2d 933 (Ala. 1980) (construing Alabama's "right to manufacture" predecessor to the North Carolina law). See also RESTATEMENT (SECOND) OF TORTS §§ 157-66 (1965); *Schronk v. Gilliam*, 380 S.W.2d 743 (Tex. Civ. App. 1964) (aerial sprayer held liable in trespass for flying over land and spraying it with a toxic substance).

225. See, e.g., *Stone Container Corp. v. Stapler*, 263 Ala. 524, 83 So. 2d 283 (1955).

226. 220 Ala. 90, 124 So. 82 (1929).

227. *Id.* at 94, 124 So. at 85.

228. See *Herrin v. Opatut*, 248 Ga. 140, 281 S.E.2d 575 (1981).

229. N.C. GEN. STAT. § 106.701(b) (Supp. 1981).

230. See, e.g., R.I. GEN. LAWS § 2-23-4 (Supp. 1982), which limits the definition to "horticulture, viticulture, viniculture, floriculture, forestry, dairy farming, or aquaculture, or the raising of livestock, furbearing animals, poultry or bees."

but also commercial activities falling outside the specific statutory definition.

Fourth, the law provides no protection during the first year of an agricultural activity's operation.<sup>231</sup>

Fifth, the statute does not protect an activity that was a nuisance at the time it began.<sup>232</sup> Presumably, this determination would be governed by legal principles applicable at the time the activity began. In any event, the parties may well have difficulty proving conditions that existed ten, fifteen, or more years prior to trial, especially where the only issue is whether the conduct was unreasonable under all the circumstances.

Sixth, the statute does not afford protection for those activities that were not nuisances at their inception but have become so for some reason other than changed local conditions.<sup>233</sup> Change in local conditions then becomes but one of several factors that are considered in determining whether the activity is a justiciable nuisance. Even ignoring changed conditions, a court may find that the social utility of an agricultural operation is outweighed by interference with a neighboring landowner's use and enjoyment of his property. Thus, a court may hold a defendant farmer liable when it finds that the plaintiff's use of his land has come to be accorded a higher social value, or the defendant's use a lower one, than was the case at the inception of his activity. Similarly, if the plaintiff shows that the defendant can prevent the interference more easily now than he could before, because, for example, improved pollution control technology is available, the defendant cannot invoke the statute as a defense. Furthermore, if a change in the defendant's mode of operating his farm, rather than a change in surrounding conditions, produces an unreasonable interference with the neighbor's use of his land, the statute does not apply. Several of the more recently enacted statutes recognize this limitation more explicitly than does North Carolina's.<sup>234</sup>

Finally, the statute does not protect the defendant against nuisance liability where the activity in question causes water pollution or changes in the flow of water.<sup>235</sup>

Allocation of the burdens of proof—both of persuasion and pro-

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231. N.C. GEN. STAT. § 106-701(a) (Supp. 1981).

232. *Id.* See also *Beam v. Birmingham Slag Co.*, 243 Ala. 313, 10 So. 2d 162 (1942). The decision points out that even though Alabama's one year statute of limitations for nuisance actions may limit the plaintiff to one year's damages, an activity that was a nuisance at its inception is still subject to being declared a nuisance and is not protected by Alabama's right to manufacture law.

233. See *Herrin v. Opatut*, 248 Ga. 140, 281 S.E.2d 575 (1981).

234. See, e.g., VA. CODE §§ 3.1-22.28 to -22.29 (1983); UTAH CODE ANN. § 78-38-7 (Supp. 1981).

235. N.C. GEN. STAT. § 106.701(c) (Supp. 1981).

duction<sup>236</sup>—will greatly influence the effectiveness of an Alabama/North Carolina-type statute. If the burdens are allocated in a way that facilitates proof of the plaintiff's case, the statute will afford farmers significantly less protection against nuisance liability. Unfortunately, there is no satisfactory test for assigning the burdens of either persuasion or production.<sup>237</sup> While it has been variously argued that the burden should be allocated to the party who must establish an affirmative proposition, to the party with greater access to knowledge about a disputed fact, or to the advocate of a "disfavored contention,"<sup>238</sup> ultimately the choice may be made primarily on the basis of fairness and, where manifest, legislative intent. If the plaintiff is proceeding under theories of trespass or negligence, the defendant can draw no support from the law.<sup>239</sup> In actions based solely on nuisance, the Alabama/North Carolina-type statute provides a defense with some attributes of a statute of limitations. Thus it seems appropriate to require the defendant, in order to invoke statutory protection, to prove as an affirmative defense that his activity falls within the definition of "agricultural operation" and has been in operation for more than one year. Because the legislature intended to protect farmers who meet these two prerequisites, the plaintiff should then be required to show either that the defendant's operation created a nuisance when it began or that it created a nuisance because of changed methods of operation, failure to use newly available pollution control technology, changing social valuations of conflicting land uses, or some other reason other than "changed conditions in or about the locality."<sup>240</sup> Although this may place a heavy burden on newcomers to prove facts more probably within the ken of the long-time farmer, it seems proper in light of the legislative intent. Furthermore, the fact that in most cases neighbors will not have complained earlier of the farm's water or air pollution will often suggest that conditions were not clearly nuisance-producing before the suit in question.

*c. Constitutional Issues*

Neighbors whose nuisance actions are barred by an Alabama/North Carolina statute may seek to challenge the statute on grounds it violates the Fifth and Fourteenth Amendments' strictures

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236. See F. JAMES & G. HAZARD, CIVIL PROCEDURE 240-61 (2d Ed. 1977).

237. *Id.* at 249.

238. *Id.* at 249-53.

239. See *St. Louis-San Francisco Ry. Co. v. Wade*, 607 F.2d 126, 131-32 (5th Cir. 1979), where the court held, in a case involving Alabama's right to manufacture law, that the jury need not consider a plaintiff's second cause of action based on negligence unless it were to conclude that the defendant fell within the statutory exemption and therefore was not liable under non-negligent nuisance theories.

240. N.C. GEN. STAT. § 106.701(a) (Supp. 1981).

against the taking of property without just compensation.<sup>241</sup> To succeed, a challenger would need to prove (a) that a legally cognizable property interest was adversely affected by the statute's operation and, (b) that the statute affected this interest in such a manner as to constitute a taking.<sup>242</sup> A thorough analysis of the constitutional issues raised by such a challenge is beyond the scope of this article.<sup>243</sup> The following preliminary analysis, however, suggests that the challenge would be unlikely to succeed.

The first hurdle encountered by a plaintiff challenging an Alabama/North Carolina statute is to define the precise property interest allegedly taken. A challenger who bought property after the enactment of the statute would be hard pressed to show that it caused him any loss. Presumably he bargained for and bought his property with knowledge of the law and of local conditions. Thus, his purchase price should have reflected the value of the property given the remedies for nuisance afforded or denied by the statute. Under these circumstances, the statute would not operate so as to effect a taking.

No challenger owning land before the enactment of the statute would be likely to succeed in an action against a farm established after the statute was enacted. An Alabama/North Carolina statute does not protect farms from suit until they have been in operation for one year.<sup>244</sup> Before the year has elapsed, plaintiffs may bring nuisance suits on a changed conditions theory. Hence, with respect to nuisance-producing farms established after the statute becomes effective, the statute functions merely as a statute of limitations.

Thus, only a challenger who bought his property before the enactment of an Alabama/North Carolina statute and who is suing a farm established before the effective date of the statute could potentially show that the statute operated so as to effect a taking of a property interest. As discussed above, however, these statutes protect only those farming operations that (1) fall within the statutory definition of an agricultural operation, (2) do not produce water pollution, (3) are not being conducted negligently or improperly, (4) did not create a nuisance at their inception and have not changed so as to presently constitute one, and (5) have become nuisances solely because of changed conditions in the locality surrounding the defendant's farm rather than on the farm itself.<sup>245</sup> If any one of these five conditions is absent, the statutes do not provide a defense, so no property interest is affected.

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241. U.S. CONST. amend. V; amend. XIV, § 1.

242. See *Penn Central Transportation Co. v. City of New York*, 438 U.S. 104 (1978).

243. For a more thorough discussion of the issue see Grossman & Fischer, *supra* note 206, at 136-42.

244. N.C. GEN. STAT. § 106.701(a) (Supp. 1981).

245. See *supra* notes 223-240 and accompanying text.

Even if the defendant farmer's operation falls within the scope of right-to-farm protection, the plaintiff-neighbor continues to use and enjoy his property as before, subject only to externalities from the defendant's farm that would not constitute a nuisance but for changes on surrounding properties. The only interest that the statute takes away, therefore, is the ability to recover nuisance damages from the farmer because changes on third parties' land have changed the character of the locale such that the farm would now be deemed a nuisance. Such an interest may well be too insubstantial to be characterized as a property interest entitled to constitutional protection.

Moreover, even if a plaintiff is able to show that he has a constitutionally protected property interest, it seems clear that an Alabama/North Carolina right-to-farm law does not cause a taking of that interest. The question of whether or not a legislature can insulate a property owner from private nuisance liability to its neighbors arose with some frequency in the nineteenth century, when both Congress and state legislatures sought to protect railroad companies as they constructed facilities across the nation.<sup>246</sup> The railroads' neighbors argued that these laws effected a taking of their property by authorizing railroads to deprive them of the enjoyment of their property and by subjecting them to serious physical discomfort and annoyance without just compensation.<sup>247</sup> In *Richards v. Washington Terminal Co.*,<sup>248</sup> a case involving a congressionally authorized railroad facility in Washington, D.C., the Supreme Court held that Congress could (1) legalize the operation of a railroad so that it could not be deemed a public nuisance,<sup>249</sup> and (2) insulate it against nuisance liability for ordinary damages to neighboring property caused by the normal, necessary and non-negligent operations of the railroad.<sup>250</sup> In the case before the Court, however, the railroad subjected plaintiff to special damages by installing fans which blew gases and soot from a nearby tunnel onto plaintiff's house. The Court held that Congress could not empower the railroad to impose a "direct and substantial and peculiar"<sup>251</sup> burden on an adjoining landowner's property (as opposed to incidental inconveniences unavoidably attendant to the operation of a railroad).<sup>252</sup> The Court indicated that this result was required in order to avoid a taking, noting by way of dicta that:

We deem the true rule, under the Fifth Amendment, as under state constitutions containing a similar prohibition, to be that while the legis-

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246. See, e.g., *Richards v. Washington Terminal Co.*, 233 U.S. 546 (1914).

247. See, e.g., *id.* at 548-50.

248. 233 U.S. 546 (1914).

249. *Id.* at 551.

250. *Id.* at 554.

251. *Id.* at 557.

252. *Id.* at 555.

lature may legalize what otherwise would be a public nuisance, it may not confer immunity from an action for a private nuisance of such a character as to amount in effect to a taking of private property for public use.<sup>253</sup>

Thus, *Richards* stands for the principle that neither Congress nor state legislatures may exempt railroads from private citizens' damage claims for special inconvenience and discomfort not experienced by the public at large.<sup>254</sup>

The precise wording and operation of the Alabama/North Carolina law distinguishes it from the railroad authorization act considered in *Richards*. The law does not authorize a farmer to engage in new or more destructive interferences with neighbors' use and enjoyment of their property, and thus avoids imposing "direct and substantial and peculiar" burdens.<sup>255</sup>

Recent case law has recognized that common law remedies (and the underlying property rights they protect) are not immutable. In *Duke Power v. Carolina Environmental Study Group*<sup>256</sup>, for example, the Supreme Court addressed the issue of whether the Price-Anderson Act,<sup>257</sup> which limits liability for nuclear accidents, violates due process by eliminating common-law tort remedies. "Initially," the Court observed, "it is not at all clear that the Due Process Clause in fact requires that a legislatively enacted compensation scheme either duplicate the recovery at common law or provide a reasonable substitute remedy."<sup>258</sup> The Court did not have to decide whether due process requires a substitute remedy because it found that Congress had in fact provided a reasonable substitute.<sup>259</sup> Nevertheless, the Court took pains to note that:

Our cases have clearly established that "[a] person has no property, no vested interest, in any rule of the common law." [citation] The "Constitution does not forbid the creation of new rights, or the abolition of old ones recognized by the common law, to attain a permissible legislative object," [citation] despite the fact that "otherwise settled expectations" may be upset thereby. [citation] Indeed, statutes limiting liability are relatively commonplace and have consistently been enforced by the

253. *Id.* at 553.

254. *Id.* at 556-57.

255. Justice Holmes noted long ago that: "It is settled that within constitutional limits not exactly determined the legislature may change the common law as to nuisances, and may move the line either way, so as to make things nuisances which were not so, or to make things lawful which were nuisances, although by doing so, it affects the use or value of property." *Commonwealth v. Parks*, 155 Mass. 531, 532, 30 N.E. 174 (1892).

256. 438 U.S. 59 (1978).

257. 42 U.S.C. § 2210 (1976).

258. 438 U.S. at 88. *But see* *In re Air Crash in Bali, Indonesia on April 22, 1974*, 684 F.2d 1301, 1312 n. 10 (9th Cir. 1982).

259. 438 U.S. at 88.

courts.<sup>260</sup>

Therefore, even if a neighbor were able to demonstrate that a property interest previously enjoyed (the private nuisance remedy) was diminished by the legislation, he may nonetheless be denied relief because he lacks a vested right in the permanency of that remedy.

## 2. *New York's Agricultural District Law*

In 1971 New York adopted the Agricultural District Law,<sup>261</sup> which provides incentives to encourage farmers to create agricultural districts. The statute then gives farmers of land within a district limited protection against local regulations, such as zoning ordinances restricting agricultural uses.<sup>262</sup> Virtually identical provisions are found in the agricultural district laws of Illinois,<sup>263</sup> Oregon,<sup>264</sup> Pennsylvania,<sup>265</sup> Virginia,<sup>266</sup> and for the Twin Cities Metropolitan Area of Minnesota.<sup>267</sup>

Although more than seventy percent of the land in agricultural production in New York is in agricultural districts,<sup>268</sup> the law has yet to be interpreted by that state's courts. On its face, the statute does not provide much protection for farmers. It permits regulations that do not "unreasonably" restrict or regulate farm structures or practices or that further the purposes of the Agricultural District Law.<sup>269</sup> The act permits even those laws that are unreasonable or that contravene its purposes so long as they bear a direct relationship to public health and safety.<sup>270</sup>

260. *Id.* n. 32 (citations omitted).

261. 1971 N.Y. Laws 479 (codified as amended at N.Y. AGRIC. & MKTS. LAW §§ 300-309 (McKinney 1972 & Supp. 1982)).

262. N.Y. AGRIC. & MKTS. LAW § 305(2) (McKinney Supp. 1982) provides:

No local government shall exercise any of its powers to enact local laws or ordinances within an agricultural district in a manner which would unreasonably restrict or regulate farm structures or farming practices in contravention of the purposes of the act unless such restrictions or regulations bear a direct relationship to the public health or safety.

263. ILL. STAT. ANN. ch. 5 § 1018 (Smith-Hurd Supp. 1982).

264. OR. REV. STAT. § 215.253 (Repl. 1981).

265. PA. STAT. ANN. tit. 3 § 912 (Purdon Supp. 1983).

266. VA. CODE § 15.1-1512B (Repl. 1982).

267. MINN. STAT. ANN. § 473H.12 (Supp. 1982). New York, Illinois, Minnesota, Pennsylvania, and Virginia have also passed right-to-farm laws that follow the Alabama/North Carolina model but are not limited to farming operations located in agricultural districts. *See supra* note 223.

268. Letter from Eileen S. Stommes, Special Assistant for Legislative Affairs, N.Y. Dep't of Agriculture and Markets, to the author (Mar. 3, 1982).

269. N.Y. AGRIC. & MKTS. LAW § 305(2) (McKinney Supp. 1982).

270. *Id.* Since these laws do not restrict private property rights, they do not present any constitutional questions involving the taking or due process clauses. They may, however, impermissibly restrict the powers of home rule municipalities in violation of state constitutional provisions. *See Myers, The Legal Aspects of Agricultural Districting*, 55 IND. L.J. 1, 35 (1979).



3. *Statutes That Create a Presumption That Agricultural Operations That Comply With Federal, State, and Local Regulations Are Not Nuisances*

The third type of right-to-farm statute creates a presumption that farming conducted in conformity with federal, state, and local law is "reasonable" and not a nuisance. The three major variants of this type of statute are based, respectively, on Washington's 1979 right-to-farm law,<sup>271</sup> Michigan's 1981 law,<sup>272</sup> and feedlot statutes such as that enacted by Kansas in 1963.<sup>273</sup>

a. *The Washington Model*

Washington adopted its right-to-farm law in 1979.<sup>274</sup> Oklahoma,<sup>275</sup> Arizona,<sup>276</sup> Kansas,<sup>277</sup> and Vermont<sup>278</sup> soon thereafter enacted virtually identical statutes. These laws provide agricultural activities conducted in conformity with federal, state, and local laws and regulations with a complete defense against nuisance suits brought by owners of adjacent lands, where the plaintiffs undertook non-agricultural activities subsequent to the initiation of farming activity.

To determine whether an agricultural activity is protected by the Washington statute, one initially must determine whether the activity conforms with applicable regulations. If so, the statute presumes that

271. WASH. REV. CODE ANN. §§ 7.48.300-.310 (Supp. 1983).

272. MICH. COMP. LAWS ANN. §§ 286.471-.474 (1981).

273. KAN. STAT. ANN. § 47.1505 (1981).

274. 1979 Wash. Laws, ch. 122, §§ 1-3 (codified at WASH. REV. CODE § 7.48.300-.310 (Supp. 1982)). The Act provides:

[Section 1]. The legislature finds that agricultural activities conducted on farmland in urbanizing areas are often subjected to nuisance lawsuits, and that such suits encourage and even force the premature removal of the lands from agricultural uses. It is therefore the purpose of RCW 7.48.300 through 7.48.310 to provide that agricultural activities conducted on farmland be protected from nuisance lawsuits.

[Section 2]. Notwithstanding any other provision of this chapter, agricultural activities conducted on farmland, if consistent with good agricultural practices and established prior to surrounding nonagricultural activities, are presumed to be reasonable and do not constitute a nuisance unless the activity has a substantial adverse effect on the public health and safety.

If that agricultural activity is undertaken in conformity with federal, state, and local laws and regulations, it is presumed to be good agricultural practice and not adversely affecting the public health and safety.

[Section 3]. As used in Section 2 of this act:

(1) "Agricultural activity" includes, but is not limited to, the growing or raising of horticultural and viticultural crops, berries, poultry, livestock, grain, mint, hay, and dairy products.

(2) "Farmland" means land devoted primarily to the production, for commercial purposes, of livestock or agricultural commodities.

275. OKLA. STAT. ANN. tit. 50, §§ 1 to 1.1 (Supp. 1982).

276. ARIZ. REV. STAT. ANN. §§ 3-1051, 3-1061 (Supp. 1982). See Comment, *The Arizona Agricultural Nuisance Protection Act*, 1982 ARIZ. ST. L.J. 689.

277. KAN. STAT. ANN. § 2.3201-03 (1982).

278. VT. STAT. ANN. tit. 12, §§ 5751-53 (Supp. 1982).

the activity is a good agricultural practice.<sup>279</sup> The statute then establishes that any agricultural operation consistent with good agricultural practices (and established prior to surrounding non-agricultural activities) is "presumed" to be reasonable, and hence not a nuisance.<sup>280</sup> This construction leaves open the possibility, however, that an operation *not* in compliance with regulations could still be found to be a good agricultural practice and thus protected by the statute. It is unclear, however, precisely what would constitute proof of good agricultural practice. Presumably, "best management practices" promulgated by EPA, the U.S. Department of Agriculture, or the state department of agriculture would qualify. Alternatively, the phrase could be construed to refer to practices actually followed by careful farmers in the area.

The Washington statute's protection is limited in several ways. First, the statute explicitly excludes activities having a substantial adverse effect on public health and safety.<sup>281</sup> This provision might be construed to mean that only activities that are public nuisances are not protected. Another interpretation would protect minor interferences with neighboring landowners' uses, but withdraw protection from activities that cause substantial harm to a neighbor's health and safety. Second, as was the case with the Alabama/North Carolina type of right-to-farm law, the Washington statute does not protect farmers against liability based on trespass or negligence, or arising out of non-commercial agriculture.<sup>282</sup> Third, the law provides no protection against nuisance suits brought by neighbors who are conducting agricultural activities even where these activities began after those of the farm operator against whom relief is sought.<sup>283</sup> This is an important omission since a large share of nuisance suits against agricultural operations have been brought by farmer neighbors.<sup>284</sup> Finally, the Washington statute is silent as to the consequences of a substantial change in the nature of the agricultural activities after the establishment of a nearby non-agricultural use. Such new farm activities would appear to fall outside the protection of the statute and have priority only over those subsequently commenced non-agricultural activities.

Like the Alabama/North Carolina right-to-farm laws, the Washington statute raises several burden of proof issues. As outlined above, the statute embodies two presumptions—first, that activities conforming to applicable regulations are presumed to be good agricultural practices; and second, that good agricultural practices are presumed to be reasonable. Even though each presumption is rebuttable, they do

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279. WASH. REV. CODE § 7.48.305 (Supp. 1983).

280. *Id.*

281. *Id.*

282. *Id.* § 7.48.310.

283. *Id.* § 7.48.305.

284. *See supra* note 64.

impose the burden of producing evidence on the plaintiff. Because the statute carves an exception to the general rules of nuisance, however, the farmer should have the burdens of production and persuasion with respect to the propositions that trigger the affirmative defense, specifically, that: (1) his activity fits the definition of agricultural activity and is on farmland as defined, (2) it was established prior to the plaintiff's surrounding non-agricultural activity, and (3) it complies with applicable federal, state, and local laws.

The Washington model does not present a serious "taking" problem because it does not affect neighbors whose non-agricultural uses predate the agricultural activity. Those neighboring landowners whose non-agricultural activities began subsequent to the farming operation but before enactment of the statute may have to prove somewhat different elements to make out a case from what they might have had to prove before the enactment, but if they can show that the farmer's operations are not consistent with good agricultural practices or have a substantial adverse effect on the public health and safety, they may still secure relief through a nuisance suit. Those who begin operations after the enactment of the statute are in the same position and, in addition, are less entitled to argue that their investment-backed expectations have been frustrated.

### *b. The Michigan Model*

The Michigan right-to-farm law,<sup>285</sup> which has been copied in vari-

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285. MICH. COMP. LAWS ANN. §§ 286.471-.473 (Supp. 1982). The Act provides:

Section 1. This act shall be known and may be cited as the "Michigan right to farm act."

Section 2. (1) As used in this act, "farm" means the land, buildings, and machinery used in the commercial production of farm products.

(2) As used in this act, "farm operation" means a condition or activity which occurs on a farm in connection with the commercial production of farm products, and includes, but is not limited to: marketed produce at roadside stands or farm markets; noise; odors; dust; fumes; operation of machinery and irrigation pumps; ground and aerial seeding and spraying; the application of chemical fertilizers, conditioners, insecticides, pesticides, and herbicides; and the employment and use of labor.

(3) As used in this act, "farm product" means those plants and animals useful to man and includes but is not limited to: forages and sod crops, grains and feed crops, dairy and dairy products, poultry and poultry products, livestock, including breeding and grazing, fruits, vegetables, flowers, seeds, grasses, trees, fish, apiaries, equine and other similar products; or any other product which incorporates the use of food, feed, fiber or fur.

Section 3. (1) A farm or farm operation shall not be found to be a public or private nuisance if the farm or farm operation alleged to be a nuisance conforms to generally accepted agricultural and management practices according to policy as determined by the director of the department of agriculture.

(2) A farm or farm operation shall not be found to be a public or private nuisance if the farm or farm operation existed before a change in the land use or occupancy of land within 1 mile of the boundaries of the farm land, and before such change in the land use or occupancy of land, the farm or farm operation would not have been a nuisance.

ous forms by Maine,<sup>286</sup> Tennessee,<sup>287</sup> and New Jersey,<sup>288</sup> provides that a farmer has an absolute defense against a public or private nuisance action if he can show either (1) that his operation conforms to generally accepted agricultural and management practices as determined by the director of the Department of Agriculture or (2) that his operation existed before a change in use or occupancy of land within one mile and was not a nuisance before such change. The second defense is virtually identical to the essence of the protection afforded by the Alabama/North Carolina model, so much of the analysis developed there is applicable here.

Tennessee's right-to-farm law<sup>289</sup> creates only a rebuttable presumption and not an absolute defense. Thus, neighbors may secure relief against a substantial interference with the use and enjoyment of their property by showing that the conduct causing the harm is unreasonable according to general principles of nuisance law. In fact, this statute appears not to change common law rules of nuisance liability significantly, since evidence that the defendant conducted the damage-producing activities in accordance with generally accepted practices always has been a factor to be considered in assessing the reasonableness of his conduct.<sup>290</sup>

### c. *Laws Pertaining to Animal Confinement Facilities*

The final type of right-to-farm law covers only animal confinement facilities. One version, found in Kansas,<sup>291</sup> and Oklahoma,<sup>292</sup> protects animal confinement facilities for cattle, swine, sheep, and horses (and for poultry in Oklahoma) over a specified size. The statute provides that the operation of a feedlot in compliance with regulations promulgated by the responsible state official will be *prima facie* evidence that a nuisance does not exist. The presumption thereby created can be rebutted by a neighbor's showing of substantial interference with his use and enjoyment of his property. There have been no judicial decisions interpreting this statute.

A second variant of the statute, found in Iowa,<sup>293</sup> Tennessee,<sup>294</sup>

286. ME. REV. STAT. ANN. tit. 17, § 2805 (1982).

287. TENN. CODE ANN. §§ 43-26-101 to -104 (Supp. 1983). It is interesting to note that House Bill No. 1556, the original version, followed Michigan's law virtually verbatim and did not cast the protections in the form of rebuttable presumptions, as did the legislation finally enacted.

288. Right-to-Farm Act, 1983 N.J. Sess. Law Serv. ch. 31 (West) (to be codified at N.J. STAT. ANN. §§ 4:1C-1 to -10).

289. TENN. CODE ANN. § 43-26-101 to -104 (Supp. 1982).

290. See *supra* text accompanying notes 35-50.

291. KAN. STAT. ANN. § 47-1501, -1505 (Supp. 1981).

292. OKLA. STAT. ANN. tit. 2, § 9-202, -210 (West 1941).

293. IOWA CODE ANN. §§ 172D.1-.4 (West Supp. 1982). See McCarty & Matthews,

and Wyoming,<sup>295</sup> applies to cattle, swine, sheep, poultry, and other animal confinement facilities. It provides that when a nuisance plaintiff has obtained title to or established residential or commercial use on his property after the date of establishment of the feedlot operation, proof that the defendant feedlot has complied with the regulations of the responsible state agency provides an absolute defense, provided that the activities causing the alleged nuisance are subject to such regulation.

These statutes also provide limited exemptions from state environmental regulations and local zoning and farm nuisance regulations. To qualify for these exemptions, feedlots must comply, first, with regulations and standards applicable under a NPDES permit,<sup>296</sup> second, with regulations of the responsible state agency and local governments that were in effect at the date of adoption of the state feedlot law, and third, with any such regulations that take effect before the agricultural activity is established. The farming activities are thus exempt from regulations adopted both after the effective date of the law and after the date they began operations. The statute also exempts the protected agricultural activities from post-1979 zoning and anti-nuisance regulations that become applicable to them because a city has annexed the land on which they are conducted.

#### 4. *Other Statutes*

Four states have enacted right-to-farm laws that do not fit easily into one of the categories discussed above. West Virginia's statute<sup>297</sup> gives limited protection to agricultural operations against subsequently begun non-agricultural uses. The statute enacted by Ohio<sup>298</sup> provides similar protection to agricultural activities that are located within an agricultural district and are not operated in violation of any federal, state, or local law. Massachusetts' law<sup>299</sup> provides simply that the odor from the normal maintenance of livestock or the spreading of manure upon agricultural or horticultural lands shall not be deemed a nuisance.

Wisconsin's law<sup>300</sup> has some interesting features. It establishes guidelines for use by judges in resolving conflicts between agricultural and other uses. First, it distinguishes between agricultural uses that are

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*Foreclosing Common Law Nuisance for Livestock Feedlots: The Iowa Statute, 1980-81* AGRIC. L.J. 186.

294. TENN. CODE ANN. §§ 44-18-101 to -104 (Supp. 1982).

295. WYO. STAT. §§ 11-39-101 to -104 (1979).

296. *See supra* notes 85-114 and accompanying text.

297. W. VA. CODE ANN. §§ 19-19-1 to -5 (Supp. 1983).

298. OHIO REV. CODE ANN. § 929.04 (Supp. 1983).

299. MASS. GEN. LAWS ANN. ch. 111, § 125A (West Supp. 1982).

300. WIS. STAT. ANN. §§ 814.04(9), 823.08 (West Supp. 1983).

not in an exclusive agricultural use zone pursuant to Wisconsin's farmland protection program<sup>301</sup> and those that are. For those that are not, closure is not to be ordered unless the use is a threat to public health or safety, plaintiffs coming to the nuisance may be granted only nominal damages, but the court may direct the farmer to adopt agricultural practices that will reduce the adverse impacts of the activity found to be causing a nuisance. For agricultural uses that are in exclusive agricultural use zones, the relief granted cannot restrict or regulate the use unless necessary to protect public health or safety. Further, if the farmer-defendant prevails, he is entitled to collect both costs and reasonable attorney's fees.

#### D. Summary.

The widespread adoption of the vast majority of right-to-farm laws in the short period from 1971 to 1982 presents an intriguing instance of parallel action by almost all state legislatures. It is intriguing for several reasons. First, the scope of the various right-to-farm laws is limited in so many ways by narrow definitions, exclusions, exceptions and rebuttable presumptions that most farmers will not be able to avail themselves of their protection. Second, as the technology forcing provisions of most federal environmental protection acts take hold, operators of the large concentrated animal confinement facilities that are the object of most agricultural nuisance suits will install better equipment and thereby reduce the amount of pollutants their operations generate. The need for right-to-farm protection will thus be reduced. Despite these considerations, right-to-farm laws, especially those that protect agricultural operations that are located in agricultural districts and being managed in conformity with federal, state and local laws against private nuisance liability, are sensible as one provision of a comprehensive farmland protection program.<sup>302</sup>

### V

#### SEPARATION: PROGRAMS DESIGNED TO PROTECT AGRICULTURAL AREAS AGAINST INTRUDING CONFLICTING USES

The final approach to managing agricultural pollution is to separate agricultural uses from other uses which are adversely affected by agricultural pollution. The principle of separation of mutually incompatible uses, the core of standard Euclidean zoning, has recently been resurrected as the functional means of achieving various environmental

301. *Id.* §§ 91.01-.79. See *infra* text accompanying note 317.

302. For a thoughtful proposal for a "second generation" right-to-farm law, see Thompson, *Defining and Protecting the Right to Farm*, 5 ZONING & PLAN. L. REP. 57, 65 (1982).

protectionist objectives.<sup>303</sup> These new programs are designed primarily to protect critical environmental areas, such as Massachusetts' wetland program<sup>304</sup> and the Wisconsin Shoreland Protection Program.<sup>305</sup> But others are more broadly conceived and advance comprehensive land use objectives, such as Hawaii's Land Use Law of 1961,<sup>306</sup> which established statewide zoning, Oregon's Land Use Act of 1973,<sup>307</sup> which established the Land Conservation and Development Commission as lead agency in a state/local land use planning and management process,<sup>308</sup> and New Jersey's Pineland Protection Act<sup>309</sup> and its State Development Guide Plan.<sup>310</sup> The objective in each case is to build legal barriers around statutorily demarcated land areas and prevent the intrusion of incompatible uses.

The promulgation in 1976 of the American Law Institute's Model Land Development Code<sup>311</sup> advanced the notion that land areas with special characteristics could be protected through separation. Article 7 of the Code is especially significant because it proposes state designation and regulation of "areas of critical state concern".<sup>312</sup> Even before final adoption, the Code served as a model for several state laws, including the Florida Environmental Land and Water Management Act of 1972,<sup>313</sup> and Minnesota's Critical Areas Act of 1973.<sup>314</sup>

Not surprisingly, several commentators have advocated the creation of agricultural districts incorporating many of the mechanisms and

303. See F. BOSSELMAN & D. CALLIES, *THE QUIET REVOLUTION IN LAND USE CONTROL* (1973); R. HEALY & J. ROSENBERG, *LAND USE AND THE STATES* (2d ed. 1979); N. ROSENBAUM, *LAND USE AND THE STATE LEGISLATURES* (1976); R. COUGHLIN, J. KEENE, J. ESSEKS, W. TONER & L. ROSENBERGER, *THE PROTECTION OF FARMLAND: A REFERENCE GUIDEBOOK FOR STATE AND LOCAL GOVERNMENTS* (1981) [hereinafter cited as R. COUGHLIN & J. KEENE, *et. al.*].

304. MASS. GEN. LAWS ANN. ch. 130, § 105 (West 1981); MASS GEN LAWS ANN. ch. 131, §§ 40, 40A (West 1981).

305. WIS. STAT. ANN. §§ 59.971, 144.26 (West Supp. 1982).

306. HAWAII REV. STAT. ch. 205 (1976 & Supp. 1982). See R. COUGHLIN & J. KEENE, *et. al.*, *supra* note 303, at 236-38.

307. OR. REV. STAT. ch. 197 (1981 Repl.).

308. See R. COUGHLIN & J. KEENE, *et. al.*, *supra* note 303, at 239-49; Gustafson, Daniels & Shirock, *The Oregon Land Use Act: Implications for Farmland and Open Space Preservation*, 48 J. AM. PLAN. A. 365 (1982).

309. N.J. STAT. ANN. § 13:18A-1 (Supp. 1983).

310. Adopted pursuant to *id.* § 13:1B-15.52. The Guide Plan was given significant effect by the New Jersey Supreme Court when it used the Plan as the centerpiece of its order implementing anti-exclusionary zoning doctrines. *Southern Burlington County NAACP v. Mt. Laurel Township*, 92 N.J. 158, 456 A.2d 390 (1983).

311. MODEL LAND DEV. CODE (1976).

312. *Id.* art. 7. See Mandelker, *Critical Areas Controls: A New Dimension in American Land Use Regulation*, 41 J. AM. INST. PLANNERS 21 (1975).

313. FLA. STAT. ANN. §§ 380.012-.12 (1977 & Supp. 1983). See R. HEALY, *LAND USE AND THE STATES* 103-35 (1976).

314. MINN. STAT. ANN. §§ 16G.01-.14 (1977 & Supp. 1983). See also N. ROSENBAUM, *LAND USE AND THE LEGISLATURES: THE POLITICS OF STATE INNOVATION* 73-75 (1976).

approaches embodied in the model code.<sup>315</sup> While recognizing the obvious differences between agricultural land and critical environmental areas, they argue that the principle of separation applies with the same force to the protection of farmland as it does to the protection of the natural environment.

At least fourteen state, two regional, and numerous local agricultural programs, of varying degrees of complexity and sophistication, but all based in part on spatial separation, have been enacted. Many of these laws seek to accomplish objectives other than reducing the impact of agricultural pollution, most notably control of urban growth and reduction of the rate of conversion of agricultural land to non-agricultural uses. Eight states<sup>316</sup> have enacted agricultural district laws that (1) rely on voluntary participation by farmers, (2) provide various types of tax relief and other incentives to induce such participation, and (3) impose few if any sanctions for withdrawal of land from the district. Six other states<sup>317</sup> and two metropolitan areas<sup>318</sup> have enacted stronger and more comprehensive agricultural land protection programs, some of which are voluntary, but all of which provide (1) varying types of incentives and (2) significant sanctions to deter conversion of land to non-agricultural use. Several have a strong planning component. The key elements of seventeen programs containing a wide variety of approaches to the twin problems of agricultural pollution and premature conversion of farmland are set out in Table 2. In several other states, most notably Illinois, Iowa, Pennsylvania, Maryland, and Washington, local governments have enacted similar agricultural zoning ordinances.<sup>319</sup>

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315. See, e.g., Geier, *Agricultural Districts and Zoning: A State-Local Approach to a National Problem*, 8 *ECOLOGY L.Q.* 665 (1980); Gustafson, *Farmland Protection Policy: The Critical Areas Approach*, 36 *J. SOIL & WATER CONSERV.* 194 (1981); Little, *Farmland Conservancies: A Middleground Approach to Agricultural Land Preservation*, 35 *J. SOIL & WATER CONSERV.* 204 (1980).

316. ILL. STAT. ANN. ch. 5, §§ 1001-20 (Smith-Hurd Supp. 1982); IOWA CODE ANN. ch. 93A, § 1.13 (West Supp. 1982); KY. REV. STAT. ANN. § 262.850 (Baldwin Supp. 1982); Agricultural Retention and Development Act, 1983 N.J. Sess. Law Serv. ch. 32 (West) (to be codified at N.J. STAT. ANN. §§ 4:1C-11 to -37); N.Y. AGRIC. & MKTS. LAW §§ 301-07 (McKinney Supp. 1982); OHIO REV. CODE ANN. § 929 (Page 1983 Leg. Bull.); PA. CONS. STAT. ANN. tit. 3, § 901-15 (Purdon Supp. 1981); VA. CODE §§ 15.1-1506 to -1513.8 (1950 & Supp. 1982).

317. CAL. GOV'T CODE §§ 51200-295 (West 1983) (Williamson Act); CAL. PUB. RES. CODE §§ 30000-30900 (West. 1977 & Supp. 1982) (California Coastal Act of 1976); HAWAII. REV. STAT. § 226 (Supp. 1982); MD. AGRIC. CODE ANN. §§ 2-501 to -515 (Supp. 1982); MINN. STAT. ANN. §§ 473.851-.872 (West 1977 & Supp. 1983); OR. REV. STAT. §§ 197, 215.203-273 (1981); VT. STAT. ANN. tit. 10, §§ 6000-6092 (1973 & Supp. 1982); WIS. STAT. ANN. § 91 (West Supp. 1982).

318. MINN. STAT. ANN. § 473H (West 1977 & Supp. 1983); Lexington-Fayette County, Ky., Zoning Ordinance 160-80 (Oct. 30, 1980).

319. For an extended discussion of the characteristics, strengths, and weaknesses of agricultural districts, agricultural zoning, and comprehensive agricultural land programs, see R. COUGHLIN, J. KEENE, *et. al.*, *supra* note 303, at 76-97, 104-47, 188-253.





	Agricultural District Laws							Comprehensive Programs									
	Kentucky	Illinois	Virginia	New York	Iowa	Pennsylvania	Ohio	New Jersey	Maryland	Calif. Wmson	Twin Cities	Lexington	Wisconsin	California Coastal Comm.	Vermont	Hawaii	Oregon
13. Eligible for purchase of development rights	x					x		x	x								
14. Limits on development of district land by zoning or other techniques									x	x	x	x	x	x	x	x	x
15. Mediation for right to farm conflicts								x									
16. Strong sanctions on withdrawal									x	x	x		x	x		x	x
17. Mandatory consistency with state or regional plans										x	x	x	x	x		x	x
18. Control over public facilities such as sewers									x		x	x					x
19. Growth boundary divides rural and urban areas											x	x		x		x	x
20. State funding of local planning activities													x				
21. State or regional permit needed for development												x		x	x	x	

\* Available to all eligible farmers in state

In Canada, the provinces of British Columbia, Saskatchewan, and Prince Edward Island have created farmland protection programs based on agricultural preserves.<sup>320</sup> In France, for over 20 years, the *Societes d'Aménagement Foncier et d'Etablissement Rural* (SAFERs) have implemented an agricultural reserves program.<sup>321</sup> The local SAFER requests the prefect of the *departement* within which it operates to designate areas that should remain in agricultural use. After the designation is approved, the SAFER may either buy farmland in the market or assert a right of first refusal in the event that land in the reserve is offered for sale. Between 1969 and 1975, SAFERs bought about twelve percent of the agricultural land sold in France each year, and resold most of it to prospective farmers.<sup>322</sup>

The various programs discussed are much too complex to describe in detail and evaluate fully here. It is important, however, to recognize that these programs represent a spectrum of responses to the problems caused by the intrusion of non-agricultural activities into farm areas. Such programs are also major building blocks of effective programs for protecting farmland and reducing the damage caused by agricultural pollution, by keeping distant uses and populations that the pollution may adversely affect.

To evaluate spatial separation one must weigh the attractiveness of incentives to participate, the comprehensiveness of the controls imposed, the severity of penalties for withdrawal, and the rigor of enforcement. If the program is voluntary, like the eight agricultural district programs and the more comprehensive approaches of Maryland and California's Williamson Act, it will be effective only to the extent that individual farmers voluntarily keep their land in the program. If the incentives for initial participation are strong, but the penalties for withdrawal weak, little actual deterrence exists when the pressure to sell and convert is high. New York's agricultural district program falls into this category. Although 70% of the state's farmland is enrolled,<sup>323</sup> there is little evidence that farmers have availed themselves of the protections of the act or that it has reduced farmland con-

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320. B.C. REV. STAT. ch. 110 (1979); P.E.I. REV. STAT. ch. L-2 (1974); SASK. REV. STAT. ch. L-2 (1978). See W. FLETCHER & C. LITTLE, THE AMERICAN CROPLAND CRISIS 146-50 (1982); Little, *Farmland Conservancies: A Middleground Approach to Agricultural Land Preservation*, 35 J. SOIL & WATER CONSERV. 204, 206-08 (1980).

321. This program is authorized by Law No. 60-808, 1960 Journal Officiel de la Republique Francaise (Aug. 7), 1960 Bulletin Legislatif Dalloz 616; Decret 61-610, 1961 J.O. (June 15), 1961 B.L.D. 407; Law No. 62-933, 1962 J.O. (Aug. 10), CODE RURAL art. 188; Ordinance No. 67-824, 1967 J.O. (Sept. 28), 1967 B.L.D. 642.

322. See W. FLETCHER & C. LITTLE, *supra* note 320, at 150-53; A. STRONG, PREEMPTION AND FARMLAND PRESERVATION: THE FRENCH EXPERIENCE (1976); A. STRONG, LAND BANKING 171-84 (1979).

323. Letter from Eileen Stommes, Special Assistant for Legislative Affairs, N.Y. Dept. of Agriculture and Markets, to the author (Mar. 3, 1982).

version significantly.<sup>324</sup> If the incentives are modest and the penalties for withdrawal strong, few farmers who are entertaining intentions of developing their land in the near future will voluntarily enroll in the program. California's Williamson Act best typifies this situation. Basically a strong act, in that it prevents conversion of farmland for at least ten years after enrollment, it has been used principally by farmers in remote rural areas where development pressures are weak.<sup>325</sup>

Thus, voluntary programs are caught in a paradox: if they are strong enough to protect agricultural areas from the intrusion of incompatible uses, they will not attract farmers in the very areas where the pressure to sell is the greatest. If their controls are so weak that farmers will not be deterred from enrolling, they will not be effective. Nevertheless, basic voluntary agricultural district programs do have some important benefits. The protections and incentives that they provide negate some of the causes of the intrusion of non-agricultural uses into agricultural areas. Moreover, they create new entities or organizations that are committed to the objective of maintaining agriculture. The mere existence of such entities may prevent some conversions that might otherwise take place.

The attractiveness of incentives and the stringency of controls are also critical when considering the political feasibility of mandatory programs like those in Oregon, Hawaii, the Twin Cities Region, Vermont, Lexington-Fayette Urban County (Kentucky), Wisconsin, and California's Coastal Zone. The greater the incentives and the weaker the controls on conversion, the easier they are to enact, and vice versa.

Perhaps the most important spatial separation technique is the "urban growth boundary." Used in its purest form in Oregon, Lexington-Fayette Urban County, and the California Coastal Zone, the urban growth boundary delineates an area within which five, ten or more years' worth of development is allowed to take place. In rural areas outside the boundary, development is barred, while present agricultural or undeveloped uses are permitted.<sup>326</sup> The boundary serves to shape landowners' and developers' expectations and, thereby, to deflect land-value-inflating development pressures away from prime agricultural land.

While it is beyond the scope of this article to propose an agricultural reserve program in full, such a program should have most of the following elements, allowing for variations in values and conditions among the states.

1. A state land planning agency with authority:

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324. R. COUGHLIN, J. KEENE, *et. al.*, *supra* note 303, at 76-93.

325. *Id.* at 206-10.

326. *Id.* at 239-53. *See also* Gustafson, Daniels & Shirock, *supra* note 308, at 365.

(a) to establish a comprehensive plan for the development and protection of the state's resources, including agricultural land, and

(b) to create urban growth boundaries around all major cities and towns located in or near agricultural reserves, within which fifteen to twenty years' anticipated growth can be accommodated.

2. A state agricultural land agency with authority:

(a) to regulate land use in agricultural reserves,

(b) to delegate the authority to regulate land use in agricultural reserves to local governments that enact regulations meeting state criteria, and

(c) to exercise a right of first refusal with respect to farmland that comes on the market and to buy it at publicly appraised fair market value and then resell it to farmers at below market value.

3. Appropriate combinations of tax reduction and other economic compensation to owners of land which has a reduced market value because placed in an agricultural reserve.

#### CONCLUSION

This article has reviewed several major approaches to managing agricultural pollution, including: (1) judicial resolution of land use conflicts based on principles of common law nuisance; (2) recent legislative attempts to limit the application of those principles by the enactment of right-to-farm laws; (3) technology-forcing regulation; and (4) spatial separation of agricultural activities from land uses with which they conflict, by the creation of agricultural districts or comprehensive farmland protection programs.

The essence of the law of private nuisance is that it involves the application of a set of general principles to a particular set of circumstances. The court must decide whether there is a substantial interference, whether the social value of one activity outweighs that of another, which of two uses is more appropriate for a particular neighborhood, and whether the harm can be either avoided or prevented at relatively little cost. The strengths of this process are first, that a landowner can do what he wants with his property so long as he does not interfere unreasonably with the rights of his neighbor, and second, that landowners can take advantage of developments in technology.

Judicial enforcement of nuisance law does have some serious weaknesses, however. *Ad hoc* resolutions often fail to produce the kind of broad information needed to solve land use problems wisely. Judges are not sufficiently responsible to the electorate to authorize them to perform what is often a political function in balancing competing social values. Moreover, judges are not equipped with the technical and financial expertise needed to decide whether or not existing techniques

for reducing the injurious impact of a particular land use are adequate or financially practicable.

Legislative approaches to the management of agricultural pollution have rested on the principles of forcing technological change, inducing spatial separation, and encouraging voluntary reduction of pollution by means of subsidies. The major federal environmental laws have led to the identification of the most serious forms of agricultural pollution and the establishment of standards that farmers are required to meet. In most cases, compliance with these standards has not been particularly onerous and has redounded to the benefit of neighboring farmers more than it has to non-farmers. The costs, benefits and practical problems associated with the management of non-point source pollution under section 208 of the Clean Water Act are in the early stages of exploration. The program is operating under a cloud of uncertainty because of budgetary cutbacks and recurring financial adversity in the agricultural sector.

The various agricultural district and farmland programs represent a rich array of techniques for enticing, rewarding, and forcing actions that support the continuation of farming in the most appropriate and fertile locations. Here, again, many programs are in such an early stage of development that their long-term effectiveness cannot be evaluated with confidence.

If there is one lesson to be learned from this review of approaches to managing agricultural pollution, it is that while some of the elements of an effective program must be nationwide in scope (such as those governing major point source pollution and the use of pesticides), the best combination of strategies must be determined on a state-by-state or region-by-region basis, so as to take into account varying conditions and values. At the core of such programs should be significant technology-forcing requirements such as those now in effect for large feedlots and pesticide production and application, perhaps supplemented by greater emphasis on conservation tilling, integrated pest management, and subsidies for soil conservation measures. These strategies should be integrated with more or less comprehensive farmland protection programs that are premised on sound analysis of soil data, farm ownership patterns, and economic trends.<sup>327</sup> Protection against private nuisance suits and excessive local regulation should be conditioned on participation in a farmland protection program. Landowners should be allowed to assert rights under principles of common law nuisance, but such suits should be primarily interstitial; they would apply only to neighboring activities that either were not complying with applicable federal and state pollution control standards, or were not subject to

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327. See F. STEINER, *ECOLOGICAL PLANNING FOR FARMLANDS PRESERVATION* (1981).

such standards and not protected by responsible participation in a state or local farmland protection program. As these programs became effective, farming and non-farming activities would be separated so there would be fewer and fewer conflicts between agricultural and non-agricultural land uses and therefore less need for private nuisance remedies. Thus, strategies aimed at the twin goals of protecting prime agricultural land from inappropriate conversion to non-agricultural uses and managing agricultural pollution can be woven together in ways that best serve the interests of both the agricultural industry and society at large.