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Groundwater Quality Regulation: Implications For Agricultural Operations

by

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GROUNDWATER QUALITY REGULATION: IMPLICATIONS FOR AGRICULTURAL OPERATIONS

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Increased public awareness of environmental contamination and greater concern concerning possible adverse health effects of contaminated groundwater is expected to affect agricultural production. Although much of the reported contamination comes from spills and other point sources, agricultural producers applying herbicides and insecticides to crops are polluting groundwater.[1] Data showing groundwater contaminated with pesticides from agricultural uses has been reported in at least 23 states.[2] Moreover, despite the history of exceptions for agriculture with regards to costly safety and enforcement legislation, given public alarm over toxic chemicals, it is likely that agriculture will be required to absorb its share of the responsibility and blame for injuries and damages from groundwater contamination. Agricultural producers should anticipate more rigorous legislation and enforcement of pollution standards for pesticide contamination of groundwater.

An example of increased enforcement efforts is the order against ten farmers initiated by the Connecticut Department of Environmental Conservation to solve groundwater contamination problems.[3] These enforcement actions sought to hold producers who used pesticides that contaminated groundwater liable for cleanup costs. The producers contended that they were not liable for costs because they had not been

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1. Nielsen & Lee, *The Magnitude and Costs of Groundwater Contamination from Agricultural Chemicals*, Washington, D.C.: U.S. Department of Agriculture, Economic Research Service, Agricultural Economics Report No. 576, 1987; Postal, *Defusing the Toxics Threat: Controlling Pesticides and Industrial Waste*, WORLDWATCH PAPER 79, 1987; U.S. Environmental Protection Agency, *Agricultural Chemicals in Ground Water: Summary Minutes from the 1987 Pesticide Strategy Workshop*, Washington, D.C.: EPA Office of Pesticides and Toxic Substances, October 1987; U.S. Environmental Protection Agency, *Agricultural Chemicals in Ground Water: Background Document*, Washington, D.C.: EPA Office of Pesticides and Toxic Substances, December 1987; U.S. Environmental Protection Agency, *Pesticides in Groundwater: Background Document*, Washington, D.C.: EPA Office of Groundwater Protection, 1986.

2. Nielsen & Lee, *supra* note 1, at 7.

3. N.Y. Times, Mar. 9, 1986, § 11, at 1; The Hartford Courant, Jan. 5, 1986, at A1, A6.

negligent; they had no intention of causing harm but were simply following the manufacturer's recommendations in the use and application of the pesticides in activities associated with their farming occupation.

However, under Connecticut law and the laws of a number of other states, the absence of negligence in the contamination of groundwater is immaterial because contaminators are liable under a strict liability standard. Thus, nonnegligent agricultural producers using pesticides incur liability for resulting injuries. The Connecticut regulatory actions jolted producer awareness of potential risks from using pesticides under a strict liability standard, and were a major impetus for the development of a legislative response. The American Farm Bureau Federation and state farm bureau organizations have advanced legislation to alter the strict liability standard for pesticide contamination through an exemption from liability for agricultural producers who apply pesticides in compliance with label instructions and applicable law so long as the producer is not negligent, reckless, or misusing the chemical.[4]

This article addresses the issue of liability for agricultural pesticide contamination and recent legislative responses favoring producers. After an overview of agricultural contamination, part II focuses on the causes of action that may be employed to assign liability for usage contamination of groundwater. A synopsis of the new groundwater exemption legislation provides the basis for a discussion of three important issues: a false sense of security, a reallocation of damages, and an image problem. Future responses and concerns are identified to advocate an alternative compromise solution that offers greater protection of the environment without unduly restricting agricultural production.

I. AGRICULTURAL CONTAMINATION

Pesticides are a major source of contamination. Each year the U.S. produces approximately 1.4 billion pounds of pesticides containing 1,200 to 1,400 active ingredients in approximately 2,500 intermediate products.[5] In 1985, American farm producers applied 390,000 tons of

4. *See, e.g., Northeast Agriculture, New York*, Feb. 1988, Insert C; *Farm Bureau Perspective*, New York Farm Bureau, Vol. 13, No. 8, Apr. 15, 1988; American Farm Bureau Issue Information, *Farmer Liability for Groundwater Contamination*, 1986; Proceedings of the 1987 Connecticut Agricultural and Resource Outlook Conference, Connecticut Cooperative Extension Service, Feb. 1987; *see* O.C.G.A. § 2-7-170 (Supp. 1988), *infra* note 64.

5. U.S. Congress, "Protecting the Nation's Ground Water from Contamination," Washington, D.C.: Office of Technology Assessment, Oct. 1984.

pesticides to the nation's agricultural land.[6] In 1982, studies disclosed that agricultural crops account for about 70 percent of U.S. pesticide usage.[7] Four major crops, corn, cotton, soybeans and wheat, may account for 85 percent of agricultural herbicide use and 70 percent of agricultural insecticide use.[8] With contamination of groundwater from pesticide usage having been confirmed in 23 states,[9] it has been estimated that nearly 50 million Americans are potentially at risk of exposure to pesticide contaminated groundwater.[10]

Agricultural pesticide contamination may be divided into five categories to further distinguish the liability issue addressed by recent legislative changes: spills, accidents, washing of equipment, disposal of materials, and usage.[11] Spills can occur while handling agricultural pesticides, both in getting the pesticides to users and by users during preparation and application of chemicals to animals, crops, and property. Accidents are differentiated from spills to include excessive applications due to leakage, high levels of concentration, faulty equipment, and improper application conditions. Contamination from the washing of equipment and improper disposal of left-over pesticides and containers are self explanatory.

These four categories of contamination are not affected by the recent legislation.[12] Thus, producers that contaminate groundwater through acts within these categories remain potentially liable for damages under applicable state law. Rather, the legislation only addresses the fifth category, usage, in an attempt to obviate liability for nonnegligent users.

II. PESTICIDE USAGE LIABILITY

Damages from groundwater contamination by agricultural producers may be addressed through several different causes of action. Perhaps the most obvious is violation of a statute. Other causes include strict liability, negligence, private nuisance, public nuisance, and trespass. Although liability under these causes varies under the laws of

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6. Postal, *supra* note 1, at 9.

7. U.S. Congress, *supra* note 5, at 283.

8. *Id.* at 283-84. Cotton may account for 47 percent of all insecticides, although this may be altered by recent boll weevil eradication program efforts. *Id.*

9. Postal, *supra* note 1, at 17.

10. Postal, *supra* note 1, at 18.

11. For other types of agricultural pollution, see Sivas, *Groundwater Pollution from Agricultural Activities: Policies for Protection*, 7 STAN. ENVTL. L.J. 117 (1987).

12. It is not clear that non-usage contamination is very serious. Given the expense of pesticides, producers have an incentive to minimize waste.

each state, an analysis of each cause delineates issues that are important for consideration in the development of policy recommendations for addressing damages from usage contamination.

A. Violation of Statute

Violation of a statute concerning groundwater or pesticides may give rise to liability under a private cause of action. Several different types of statutes need to be identified: (1) safety statutes and statutes establishing standards, (2) strict liability statutes, (3) statutes with criminal penalties, and (4) permit statutes with express or implied private rights of action.

1. Safety Statutes and Standards

Violation of safety statutes or statutes establishing standards are ordinarily held to be negligence per se if the statute expresses a policy for the protection of a certain class of persons.[13] Of course, harm or damage occasioned must be of a type intended to be prevented to a member of the enumerated class.[14] Negligence per se is not liability per se; defenses of assumption of risk, contributory negligence, and proximate cause are still available to defeat liability.[15]

States that have adopted legislation requiring persons to apply pesticides according to label instructions may legislate statutory negligence for contamination of groundwater by pesticides.[16] A plaintiff would allege that the injuries from contamination arose from defendant's failure to follow label instructions in using a pesticide, state law would determine whether failure to follow directions was negligence per se, and the jury would determine whether the defendant had deviated from the label instructions.

However, some safety statutes are general in scope so they may require a plaintiff to prove negligence. An example is a Texas case that considered an action for damages from groundwater contamination in which the pollution violated a safety rule.[17] The court noted that viola-

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13. Seim v. Garavalia, 306 N.W.2d 806 (Minn. 1981).

14. *See, e.g.*, Bennett v. Larsen Co., 118 Wis.2d 681, 348 N.W.2d 540 (1984); Agricultural Servs. Ass'n, Inc. v. Ferry-Morse Seed Co., 551 F.2d 1057, 1067-68 (6th Cir. 1977); Sanchez v. Galey, 112 Idaho 609, 733 P.2d 1234 (1986).

15. *Seim*, 306 N.W.2d at 810.

16. *See* Bennett v. Larsen Co., 118 Wis.2d 681, 348 N.W.2d 540 (1984), where a statutory provision concerning use of a pesticide inconsistent with its label was found to modify common law so that violation was negligence per se. *Id.* at 688, 348 N.W.2d at 548.

17. Murfee v. Phillips Petroleum Co., 492 S.W.2d 667 (Tex. Ct. App. 1973).

tion of safety statutes often constituted negligence per se, but concluded that given the facts, a specific finding of negligence was required.[18]

Another variation of violation of a statutory prohibition is that the conduct might constitute a nuisance per se.[19] The Utah Supreme Court found that the percolation of chemicals from the defendant's waters into the subterranean water system feeding plaintiffs' wells, violating a state statute, was a nuisance per se which gave rise to liability.[20]

2. *Strict Liability Statutes*

Negligence per se may be contrasted with statutory strict liability and statutory absolute liability. Statutory strict liability creates a basis for recovery where none previously existed[21] and violation by itself renders the violator liable without any showing of fault.[22] Comparative fault may apply. Absolute statutory liability precludes all defenses and places liability for damages from injuries on the person violating the statute.[23]

3. *Statutes with Criminal Penalties*

In general, persons who violate statutes with criminal penalties may be found to be negligent per se.[24] Thus, the existence of criminal penalties in a statute may obviate proof of negligence, but not the establishment of liability.

4. *Permit Statutes*

Another type of statutory violation may occur under a permit statute. Although permit legislation generally provides for penalties if persons fail to secure a requisite permit, violation under exceptional circumstances constitutes negligence that may countenance a cause of action. Failure to secure a permit may constitute negligence when the permit statute requires substantive standards and the failure to secure a permit led to harm of a type covered by the statute.

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18. *Id.* at 673.

19. Branch v. Western Petroleum Inc., 657 P.2d 267 (Utah 1982).

20. *Id.* at 276.

21. This may be contrasted to negligence per se statutes that are generally penal in nature without an express provision for a civil action. *Seim*, 306 N.W.2d at 811.

22. *Id.*

23. *Id.* at 810.

24. *Bennett*, 118 Wis.2d at 689, 348 N.W.2d at 548.

This exception applied to alleged groundwater contamination was considered by the Supreme Court of New Hampshire in *Bagley v. Controlled Env't Corp.*[25] In *Bagley*, a landowner sued for damages for injuries from chemicals that the defendant allowed to enter the groundwater. The alleged violation was predicated on a statutory violation of failure to secure a permit to operate a hazardous waste facility. Although the permitting statute did not impose specific standards, the *Bagley* court noted that it required substantive disposal standards appropriate for each application to protect the public.[26] Therefore, the court found that the permit conditions should be afforded the same status as substantive statutory standards.[27] Under New Hampshire law, the defendant's failure to secure a permit precluded the implementation of appropriate standards to protect the public and thus could violate a statutory standard of conduct. Since "a violation of a 'statutory standard of conduct' [was] equivalent to a violation of the common law duty of care . . .,"[28] the allegation stated a cause of action.

The court also analyzed plaintiff's right to maintain a private cause of action based upon analogy of the provisions for a public cause of action for damages rather than penalties. In the furtherance of public safety, the statute granted the general public the right to recover cleanup costs. The court found that a similar cause of action is appropriate for private property owners.[29]

B. Strict Liability

In addition to strict or absolute liability under statute, agricultural producers contaminating groundwater by the use of pesticide may be strictly liable under one of three categories; state adoption of *Rylands v. Fletcher* doctrine, state adoption of the RESTATEMENT (SECOND) OF TORTS, and application of pesticides.

1. Rylands v. Fletcher Doctrine

The American adoption of the doctrine of strict liability from the English case of *Rylands v. Fletcher*[30] for abnormally dangerous conditions and activities relieves plaintiffs from proving negligence. Some

25. Bagley v. Controlled Env't Corp., 127 N.H. 554, 503 A.2d 823 (1986).

26. *Id.* at 828.

27. *Id.*

28. *Id.* at 827-28. The court relied on Moulton v. Groveton Papers Co., 112 N.H. 50, 123 A.2d 151 (1956).

29. *Bagley*, 127 N.H. at 559-60, 503 A.2d at 828-29.

30. 3 L.R.-E. & I. App. 330 (H.L. 1868).

version of this doctrine has been adopted in approximately thirty jurisdictions in the United States.[31]

Strict liability adopted from *Rylands v. Fletcher* applies to percolating water. In *Branch v. Western Petroleum, Inc.*,[32] the court applied the doctrine to a defendant who allowed a waste water pit to pollute water in plaintiff's well. The Maryland Court of Appeals noted the applicability of *Rylands v. Fletcher* and the RESTATEMENT (SECOND) OF TORTS to find a defendant owner of an underground gasoline tank liable under strict liability for contamination of a well.[33] Although it is not clear that agricultural producers contaminating groundwater through their usage of pesticides fall within the activities covered by this doctrine, it does offer an appealing argument for injured plaintiffs.

2. *Restatement (Second) of Torts*

The RESTATEMENT adopts a modified *Rylands v. Fletcher* doctrine for abnormally dangerous activities.[34] Liability under the RESTATEMENT requires consideration of six factors to determine abnormal use:

> In determining whether an activity is abnormally dangerous, the following factors are to be considered:
> (a) existence of a high degree of risk of some harm to the person, land or chattels of others;
> (b) likelihood that the harm that results from it will be great;
> (c) inability to eliminate the risk by the exercise of reasonable care;
> (d) extent to which the activity is not a matter of common usage;
> (e) inappropriateness of the activity to the place where it is carried on; and
> (f) extent to which its value to the community is outweighed by its dangerous attributes.[35]

Whether pesticide usage leading to groundwater contamination by pesticide usage is abnormally dangerous is open to question, and will depend on an analysis of the enumerated factors. It has been found

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31. The doctrine has not been adopted in Maine, New Hampshire, New York, Oklahoma, Rhode Island, Texas and Wyoming. W. KEETON, D. DOBBS, R. KEETON & D. OWEN, PROSSER AND KEETON ON THE LAW OF TORTS 549 (5th ed. 1984).

32. 657 P.2d 267 (Utah 1982).

33. Yommer v. McKenzie, 255 Md. 220, 257 A.2d 138 (1969).

34. One who engages in an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm. This strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.
RESTATEMENT (SECOND) OF TORTS, §§ 519-520.

35. *Id.*

that the disposal of mercury, other toxic wastes[36] and aerial spraying of pesticides[37] are abnormally dangerous activities. Yet, some pesticides are not so dangerous or their use is not so inappropriate that they fall within this category.[38]

3. *Application of Pesticides*

If a state has adopted legislation that requires operators to obtain a permit prior to application or use of a pesticide, it may be assumed that use of the pesticide is an abnormally dangerous activity.[39] Four states, Louisiana, Oklahoma, Oregon and Washington, have precedents that suggest that persons engaging in the aerial application of pesticides are subject to a strict liability standard for resulting drift damages.[40] Furthermore, a Louisiana court held defendants strictly liable for damages from the application of a arsenic pesticide to control weeds that resulted in the death of plaintiff's cattle.[41] Although these precedents rely on a different basis for strict liability,[42] they offer courts an opportunity to reach a similar conclusion that defendants may be strictly liable for contamination of groundwater by pesticide usage.

C. *Negligence*

Liability based on negligence for groundwater contamination by pesticide usage is dependent upon proof of a breach of a duty of care and causation. In most situations, this will require evidence that the polluter knew or should have known that its activity would be likely to

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36. State Dept. of Envtl. Protection v. Ventron Corp., 94 N.J. 473, 468 A.2d 150, 160 (1983).

37. Langan v. Valicopters, Inc., 88 Wash.2d 855, 567 P.2d 218 (1977); *cf.*, Ligocky v. Wilcox, 95 N.M. 275, 620 P.2d 1300 (1980).

38. The appropriateness would depend on the chemical, application mode, and location. At least one state, Wisconsin, has a court precedent providing that pesticide spraying is not an ultrahazardous activity so that a jury instruction on strict liability was not required. Bennett v. Larsen Co., 118 Wis.2d 681, 694, 348 N.W.2d 540, 553 (1984).

39. Bella v. Aurora Air, Inc., 279 Or. 13, 566 P.2d 489 (1977).

40. Gotreaux v. Gary, 232 La. 373, 94 So.2d 293 (1957); Russell v. Windsor Properties, Inc., 366 So.2d 219 (La. Ct. App. 1978); Young v. Darter, 363 P.2d 829 (Okla. 1961); Bella v. Aurora Air, Inc., 279 Or. 13, 566 P.2d 489 (1977); Loe v. Lenhardt, 227 Or. 242, 362 P.2d 312 (1961); Langan v. Valicopters, Inc., 88 Wash.2d 855, 567 P.2d 218 (1977).

41. Winston v. State Dept. of Highways, 352 So.2d 752 (La. Ct. App. 1977).

42. The court in *Young* relied upon the *Rylands* doctrine and trespass to find the defendant liable regardless of negligence. *Young*, 363 P.2d at 834 (trespass); *see also* Bella v. Aurora Air, 279 Or.13, 566 P.2d 489 (1977) *and* Loe v. Lenhardt, 227 Or. 242, 362 P.2d 312 (1961) (trespass and pesticide permitting legislation); Russell v. Winder Properties, Inc., 366 So.2d 219 (La. Ct. App. 1978) (strict liability for ultrahazardous activities using herbicides).

cause the injury and evidence that the activity did in fact cause the injury. The difficult burden of establishing proof for this theory means that plaintiffs will prefer to establish causes of action in strict liability, private nuisance, or violation of statute.

However, liability under negligence is significant after evidence of contamination becomes known, since tardy remedial response to contamination may lead to liability.[43] Thus, if a producer continues to use a pesticide that is known to cause contamination, the producer may be subject to liability under negligence for the resulting injuries and damages. Furthermore, negligence of an extreme nature could lead to punitive damages.[44]

D. Private Nuisance

An unreasonable injury from substantial and unreasonable interference with use and enjoyment of property could give rise to liability as a private nuisance. Although such interference generally must be intentional, the RESTATEMENT (SECOND) OF TORTS allows an action in private nuisance "when the interference is accidental and otherwise actionable under rules controlling liability either for negligent, reckless, or abnormally dangerous conduct."[45] Liability in nuisance is predicated upon unreasonable injury rather than upon unreasonable conduct.

Cases disclose that contamination of groundwater may constitute an actionable nuisance.[46] Recovery under the theory of private nuisance for contamination of plaintiffs' groundwater supply when gasoline leaked from underground storage tanks was affirmed in *Exxon Corp. v. Yarema*.[47] The court found that the disturbance of plaintiffs' water supply constituted a nuisance that provided ample authority for an award of damages.[48] Pollution of groundwater by a salt plant was found to be a nuisance *per accidens* by a federal district court in *Miller v. Cudahy* and defendants were liable for the actual damages flowing

43. Exxon Corp. v. Yarema, 69 Md. Ct. App. 124, 139, 516 A.2d 990, 1005 (1986).

44. Negligent conduct of an extraordinary nature involving actual or implied malice may justify awards of punitive damages. If a polluter acts with wanton or reckless disregard for the rights of others, such as disregarding the serious risks of groundwater contamination, then the evidence may be sufficient to support an award of punitive damages. *Id.* at 144, 516 A.2d at 1010.

45. RESTATEMENT (SECOND) OF TORTS (1965) § 822.

46. Exxon Corp. v. Yarema, 69 Md. Ct. App. 124, 516 A.2d 990 (1986); Miller v. Cudahy Co., 656 F. Supp. 316 (D. Kan. 1987), *modified*, 858 F.2d 1449 (10th Cir. 1988), *cert. denied*, 109 S. Ct. 3265 (1989).

47. 516 A.2d 990, 1004 (Md. 1986).

48. *Id.*

from the nuisance.[49]

E. Public Nuisance

Injuries from substantial and unreasonable interference with use and enjoyment of an interest common to the general public rather than individuals may also give rise to liability as a public nuisance, although it is rare.[50] Groundwater contamination may cause such interference and be a public nuisance.[51]

F. Trespass

If an agricultural producer allows pesticides to invade the property of another, as opposed to interfering with another's enjoyment of property, then the cause of action will be in trespass rather than nuisance. A major question under trespass is the same as under private nuisance; is intent required or may liability be imposed for unintentional trespass? Although trespass has been categorized as an intentional tort, this historic definition has been modified in some states so that unintentional entries accompanied by negligence or arising out of extrahazardous activities can be found to constitute trespass.[52]

Prosser and Keeton argue that subsurface invasions of liquids should not be regarded as trespassory because of the indirect, rather than direct, nature of the invasion and the fact that the cause is actionable under nuisance law.[53] However, the abandonment of distinction between direct or indirect invasions and the demise of former procedural forms suggest that it is likely that underground contamination of water will be found to constitute an actionable trespass in some states without proof of intent. Thus, there are three major possibilities for trespass.

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49. *Miller*, 656 F. Supp. 316 (D. Kan. 1987), *modified*, 858 F.2d 1449 (10th Cir. 1988), *cert. denied*, 109 S. Ct. 3265 (1989).

50. *See* Davis, *Groundwater Pollution: Case Law Theories for Relief*, 39 MO. L. REV. 117 (1974).

51. *See* Watson v. Great Lakes Pipeline Co., 85 S.D. 310, 182 N.W.2d 314 (1970); Branch v. Western Petroleum, Inc., 657 P.2d 267 (Utah 1982) (the contamination of underground water supplies in violation of state pollution law may give rise to nuisance per se).

52. *See* W. KEETON, D. DOBBS, R. KEETON & D. OWEN, PROSSER AND KEETON ON THE LAW OF TORTS (5th ed. 1984); Furrer v. Talent Irrigation Dist., 258 Or 494, 466 P.2d 605 (1970); Loe v. Lenhardt, 227 Or. 242, 362 P.2d 312 (1961).

53. W. KEETON, D. DOBBS, R. KEETON & D. OWEN, PROSSER AND KEETON ON THE LAW OF TORTS 72, 622 (5th ed. 1984).

1. *Knowledge*

If a defendant has knowledge that harmful chemicals from pesticide application are seeping onto a neighboring property, there exists an intentional intrusion that would support an action in trespass.[54]

2. *Dangerousness*

If usage of a pesticide is considered to be a dangerous or extrahazardous activity, a defendant may be strictly liable if there is entry on another's property without permission. Liability under this standard has been imposed for aerial spraying with pesticides.[55]

3. *Negligence*

If an activity is not extrahazardous, then negligence causing a trespass may lead to liability for damages. An Oregon court opined that seepage from an underground storage tank was not dangerous or extrahazardous, but intimated that the defendant could be liable under negligence for not taking appropriate steps to discover the leaky tank.[56] The Kansas Supreme Court found that excessive pollution of surface and groundwater from a commercial feedlot was sufficient to sustain an award of damages.[57]

III. SELECTED STATE RESPONSES

Several state legislatures have recently considered legislation to alter the standard of liability for damages from groundwater contamination from pesticide usage[58] The legislation may be grouped into two categories: legislation that grants or attempts to grant agricultural producers an exception from strict liability for pesticide usage and legislation that grants agricultural producers some type of minor dispensation

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54. *See Furrer*, 258 Or. at 504, 466 P.2d at 615 (defendant's knowledge that water was seeping onto plaintiffs' land was found to give rise to an actionable trespass).

55. *Loe*, 227 Or. 242, 362 P.2d 312.

56. Hudson v. Peavy Oil Co., 279 Or. 3, 6, 566 P.2d 175, 178 (1977).

57. Atkinson v. Herington Cattle Co., 200 Kan. 298, 436 P.2d 816 (1968).

58. *See* ARIZ. REV. STAT. ANN. § 49-283 (1988); 1988 Conn. Pub. Acts No. 88-211; O.C.G.A.] 2-7-170 (Supp. 1988); IOWA CODE ANN. § 455E.6 (Supp. 1988); New York Assembly Bills No. 2679-B, 8229, Senate Bill No. 1881-B (1987); VT. STAT. ANN. § 1410(d) (Supp. 1987). Of course, not all states have rushed to shield agricultural producers. In fact, the most important agricultural state, California, has enacted legislation for chemical discharges that places liability on persons who knowingly discharge or release a chemical known to cause cancer or reproductive toxicity into water or onto land where such chemical passes into sources of drinking water. CAL. HEALTH & SAFETY CODE §§ 25249.5 - 25249.13 (Supp. 1988).

for contamination from pesticide usage.

A. Groundwater Exception Legislation

The legislatures of Georgia, Iowa, Minnesota, and Vermont have enacted groundwater exception legislation that alters the strict liability standard for contamination from pesticide usage. Based on the policy argument that agricultural producers should not be liable for nonnegligent usage of pesticides, the legislation provides producers an exception so that they do not incur liability under a strict liability statute. Thus, the above-referenced groundwater exception statutes do not preclude litigation nor liability so that an allegation that groundwater contamination was caused by improper usage, negligent washing of equipment or unacceptable disposal of materials is not to be affected by this legislation. In addition, causes of action in nuisance are presumably permitted. At most, the groundwater exception legislation offers limited protection by precluding successful actions in strict liability.

Vermont was the first state to enact groundwater exception legislation in 1985 when the legislature added subsection (d) to its provisions on rights of action for groundwater quality.[59] Briefly, Vermont statutory law provides that any person who alters groundwater quality as a result of agricultural activities shall be liable only if the alteration was either negligent, reckless or intentional.[60]

Iowa provided an exception from liability for agricultural producers using fertilizer and pesticides in its Groundwater Protection Law.[61] Agricultural producers shall not be liable for costs of active cleanup or damages from the application of nitrates or pesticides if certain prerequisites were met.[62] The prerequisites include following label instruc-

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59. (c) Any person may maintain under this section an action for equitable relief or an action in tort to recover damages, or both, for the unreasonable harm caused by another person withdrawing, diverting or altering the character or quality of groundwater.
(d) Notwithstanding the provisions of subsection (c) of this section, a person who alters groundwater quality or character as a result of agricultural or silvicultural activities, or other activities regulated by the commissioner of the department of agriculture, shall be liable only if the alteration was either negligent, reckless or intentional.
VT. STAT. ANN. § 1410 (Supp. 1987).

60. *Id.*

61. IOWA CODE ANN. § 455E (Supp. 1988).

62. This chapter supplements other legal authority and shall not enlarge, restrict, or abrogate any remedy which any person or class of persons may have under other statutory or common law and which serves the purpose of groundwater protection. An activity that does not violate chapter 455B does not violate this chapter. In the event of a conflict between this section and another provision of this chapter, it is the intent of the general assembly that this section prevails.

tions and application in conformance with soil testing results. Compliance with the statutory provisions may be raised as an affirmative defense.[63]

Georgia enacted groundwater exception legislation in 1988 that contains a definitive exception for agricultural producers who apply fertilizer, plant growth regulators or pesticides consistent with labeling and in accordance with acceptable agricultural management practices and applicable state and federal laws.[64] Agricultural producers are ex-

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Liability shall not be imposed upon an agricultural producer for the costs of active cleanup, or for any damages associated with or resulting from the detection in the groundwater of any quantity of nitrates provided that application has been in compliance with soil test results and that the applicator has property complied with label instructions for application of the fertilizer. Compliance with the above provisions may be raised as an affirmative defense by an agricultural producer.

Liability shall not be imposed upon an agricultural producer for costs of active cleanup, or for any damages associated with or resulting from the detection in the groundwater of pesticide provided that the applicator has properly complied with label instructions for application of the pesticide and that the applicator has a valid appropriate applicator's license. Compliance with the above provisions may be raised as an affirmative defense by an agricultural producer.

IOWA CODE ANN. § 455E.6 (Supp. 1988).

63. However, the statute also says that it does "not enlarge, restrict, or abrogate any remedy under other statutory or common law which serves the purpose of groundwater protection." IOWA CODE ANN. § 455E.6 (Supp. 1988). It is therefore not clear exactly what protection is afforded producers. If the statute does not restrict nor abrogate remedies under common law, how can the exceptions for agricultural producers be given any effect?

64. (a) No person, firm, or corporation engaged in an agricultural, silvicultural, farming, horticultural, or similar operation, place, establishment, or facility, or any of its appurtenances, who has applied or used or arranged for the application or use of any fertilizer, plant growth regulator, or pesticide . . . shall be responsible or liable under this title and Title 12, without proof of negligence or lack of due care, for any damages, response costs, or injunctive relief relating to any direct or indirect discharge or release into, or actual or threatened pollution of, the land, waters, air, or other resources of the state that is or may be associated with or resulting from such application or use, provided that:

(1) Such application or use was in a manner consistent with the labeling of such fertilizer, plant growth regulator, or pesticide and in accordance with acceptable agricultural management practices and all applicable state and federal laws and regulations at the time of such application or use;

(2) The state or federal government, or any of its agencies, had approved, recommended, or permitted the application or use and there is no finding that any conditions of such approval, recommendation, or permit were violated, or that warnings or limitations regarding the application or use were ignored; and

(3) Such fertilizer, plant growth regulator, or pesticide was licensed by or registered with the state or federal government at the time of such application or use and such person, firm, or corporation knew of no special geological, hydrological, or soil type condition existing on the land which rendered such application or use likely to cause pollution. No person, firm, or corporation shall be liable based solely on ownership of the land where such application or use took place . . . .

empted from liability unless there is proof of negligence or lack of due care.

Minnesota's law relates to agricultural pesticides, fertilizers, plant amendments, and soil amendments in groundwater.[65] Under this law, end users and landowners have a complete defense to liability if they applied or had the chemicals applied "in compliance with state law, with any applicable labeling, and orders of the commissioner [of Agriculture]."[66]

B. Minor Dispensation from Liability

At least two states have legislation that may relieve agricultural producers from some liability for pesticide usage. Arizona enacted legislation that provides that application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act[67] and applied according to label requirements is not subject to liability under remedial actions.[68] Connecticut has a similar provision that exempts qualifying agricultural producers from providing potable drinking water.[69] However, these laws specifically do not limit the right of action against agricultural producers for injury to persons or property resulting from the use of a pesticide. In addition, a number of states are considering legislation that may relieve agricultural producers from some liability for pesticide usage, including Hawaii, Massachusetts, and New York.

IV. LEGISLATIVE SHIFT OF LIABILITY

The groundwater exception legislation enacted by the legislatures of Vermont, Georgia, Minnesota, and Iowa pose three significant questions: will the legislation be counterproductive because it gives growers a false sense of security, does the legislation provide an acceptable real-

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O.C.G.A. § 2-7-170 (Supp. 1988).

65. 1989 Minn. Laws, Ch. 326, Art. 7, § 2.

66. (a) Notwithstanding other law relating to liablility for agricultural chemical use, an end user or landowner is not liable for the cost of active cleanup, or damages associated with or resulting from agricultural chemicals in groundwater if the person has applied or has had others apply agricultural chemicals in compliance with state law, with any applicable labeling, and orders of the commissioner.

(b) It is a complete defense for liability if the person has complied with the provisions in paragraph (a).

1989 Minn. Laws, Ch. 326, Art. 7, § 2.

67. 7 U.S.C.A. § 136 *et seq.*

68. ARIZ. REV. STAT. ANN. § 49-283D (1988).

69. 1988 CONN. PUB. ACT No. 88-211.

location of risk, and does the legislation contribute to an image problem for agricultural producers?

A. False Sense of Security

By limiting private remedies against agricultural producers, the groundwater exception legislation may lessen producer concern about damages that may arise from pesticide usage and reduce incentives to adopt better technology or husbandry practices to control agricultural pollution. However, producers remain liable for contamination damages in negligence and nuisance. Thus, producers' decreased vigilance in reducing contamination may be unfounded and could lead to greater liability under negligence and nuisance lawsuits.

B. Reallocation of Damages

When groundwater contamination causes injuries, resulting damages accrue to someone. Liability may be borne by contaminant manufacturers, property owners, government, injured parties, or a combination of these groups. Since producers' liability for contamination was pursuant to established legal provisions, the new groundwater exemption legislation entails a shift of liability to another group. In the absence of provisions establishing liability for contamination, damages from pesticide usage contamination will fall upon injured parties. Thus, the groundwater exception legislation advances a policy of favoring nonnegligent producers over nonnegligent injured victims. Of course a government may grant some type of monetary relief to innocent victims of contamination.[70] However, if producers are causing the problem and have more control over ameliorating damages, it is not clear why they should be favored over victims.

C. Image problem

The groundwater exception legislation may exacerbate the image problem whereby a significant portion of the public views agricultural producers as polluters. The legislative change from a strict liability to a negligence standard suggests that producers feel that pesticide usage is not dangerous and do not want to accept responsibility for their actions. Moreover, the liability change is counter to recent public responses to various hazards under products liability and tort law. Thus, the legisla-

70. Some states, including Arizona, Connecticut, and Iowa, have a compensation fund that provides compensation for some injuries caused by pesticide usage contamination.

tion challenges public sentiment that those persons causing damages, whether negligent or not, should be liable.

This image problem could adversely impact future policy decisions concerning farm support programs and general governmental support for agriculture. Furthermore, the legislation presumably does not make good economic sense from a perspective of our society. Elementary economics concerning the placement of risk suggests that the person with the greatest control over the origination of damages should bear the burden of liability for the damages.[71]

V. Future Responses and Concerns

The American public is scared. Although knowledge of groundwater contamination is fragmentary, and in many cases the possible adverse health effects are unknown, the public wants a safe and healthy environment. The public's concern may be expected to lead to increased monitoring and collection of data, more research of risk assessment of contaminants, and the continued development and refinement of contaminant detection techniques. Moreover, additional governmental regulation will likely include implementation of more strict pesticide disposal regulations, the development of maximum contaminant levels for specific chemicals in groundwater, economic incentives to reduce chemical use, and increased coordination of food production and commodity programs with conservation and environmental programs. Economic incentives may be implemented through pesticide taxes, governmental subsidies conditioned on practices that reduce pesticide usage, and coordination of food production with conservation practices.

Increased concern about the environment and the risks from possible pesticide contamination are expected to have a number of effects on agricultural producers. Producers may be expected to adopt better integrated pest management practices, use greater precaution to prevent spills and accidents, use greater care in disposing of excess chemicals and wastes, become more interested in low input agricultural practices, and use new discoveries of biological controls of pests, disease-resistant plants, and substitute plant proteins. Although many of these producer responses will not be tied to specific regulatory controls, they will have significant ramifications for American agriculture as they will undoubtedly affect its structure. Producers will want to participate in the devel-

71. *See* Shavell, *Strict Liability Versus Negligence*, 9 J. Legal Stud. 1 (1980); Horvitz & Stern, *Liability Rules and the Selection of a Socially Optimal Production Technology*, 9 Int'l Rev. L. & Econ. 121 (1987).

opment of new regulations since over-zealous protection of the environment may adversely effect the competitiveness of American agriculture in world markets.

The groundwater exception legislation might be a Pyrrhic victory for agricultural producers over environmental interests. Although the reduction of risks for producers engaging in proper agricultural husbandry practices may be an acceptable and even laudable social goal, the issue is not that simple. By freeing producers from liability, contamination losses fall on innocent victims which may generate increased support for more stringent regulations regarding pesticide usage. Rather than grant special interest groups exculpatory legislation, a more feasible legislative response might be to establish some type of insurance program to cover losses, with revenues generated from pesticide use taxes, or a comprehensive groundwater contamination program that would implement a combination of regulatory and land use controls. Given the diverse interests regarding public safety, the importance of a food supply, and the concern about a healthy rural economy, compromise legislation is needed to offer greater protection of the environment while allowing agriculture to remain viable and competitive.