Farmers, Feedlots and Federalism: The Impact of the 1972 Federal Water Pollution and Control Act Amendments on Agriculture

by

N. William Hines

Originally published in SOUTH DAKOTA LAW REVIEW
19 S. D. L. REV. 540 (1975)

FARMERS, FEEDLOTS AND FEDERALISM: THE IMPACT OF THE 1972 FEDERAL WATER POLLUTION AND CONTROL ACT AMENDMENTS ON AGRICULTURE

BY N. WILLIAM HINES*

This article discusses the applicability of the 1972 amendments to the Federal Water Pollution Control Act to sources of agricultural water pollution, and the manner set out in recent regulations under that Act to totally eliminate agricultural pollutant discharges by 1985. The author focuses upon provisions of the Act and regulations thereunder regulating point sources of pollution by such agriculture operations as concentrated cattle feed lots, and expresses concern over the lack of similarly effective regulations designed to eliminate, by far the greatest source of agricultural pollutants, land runoffs or nonpoint sources of pollution. Throughout the article the author explains the interrelationship of the federal Environmental Protection Agency and the states in implementation and enforcement of the Act's provisions.

INTRODUCTION

> [O]ur problems [in the farm belt] have no relation to the present national drive relative to water control programs . . . [W]e have water quality standards today that we cannot hope to meet . . . if we were to move all people, all industry, all municipalities out of the State.[1]

Since the late 1960's, water pollution control officials, like Mr. Gray quoted above, have increasingly been sounding warnings about the extent of water quality degradation caused by sources other than the industrial and municipal dischargers, whose waste-streams have been the central concern of regulation to date. As pollution from discrete urban sources is gradually being eliminated, the magnitude of the water quality problems attributed to rural sources is becoming more obvious. In some regions, significant man-caused water pollution in rural areas results from construction activity, mine drainage and silviculture, but in the nation's heartland modern commercial agriculture is the primary culprit. Animal wastes draining from feedlots and from open pastureland, and silt,

---

* Foundation Professor, University of Iowa College of Law. A.B. 1958, Baker University; L.L.B. 1961, University of Kansas. The author wishes to acknowledge the valuable assistance of Mr. Neil Onerheim in the preparation of this article. Mr. Onerheim is a second year law student at the University of Iowa.

1. Statement of Melville W. Gray, Kansas State Department of Health, in *Hearings on Water Pollution Control Legislation—1971 (Oversight of Existing Program) Before the House Comm. on Public Works*, 92d Cong., 1st Sess. at 491 (1971).

chemical fertilizers and pesticides washing from cropland comprise the bulk of midwest agriculture's contribution to the degradation of water quality.

The Iowa-Nebraska-Missouri reach of the Missouri River periodically carries an organic loading equivalent to the raw sanitary sewage of eighty million people. Less than twenty percent of this waste load is attributable to the cities and industries in the basin.[2] Solids, primarily silt, entering streams and lakes as a result of agricultural land runoff are estimated to be 700 times the total solids discharged by all municipal sewage plants in the country.[3] Pesticides washed into waterways from intensively cultivated land in Iowa have become so concentrated in stream-bottom sediments that fish caught from the waters have been declared unsafe to eat.[4] Thus, pollutants which this author described in an earlier article as the "unseen foe in the war on water pollution"[5] are now gaining a vivid visibility.

The 1972 Amendments to the Federal Water Pollution Control Act[6] [hereinafter 1972 Act] represent a bold change in the national strategy for combating water pollution. Prior to 1972, the nation's water pollution policy was directed toward a goal of improving and preserving every body of water to the point that the water was qualitatively adequate to support all of the beneficial uses people wished to make of it.[7] This policy, which focused regulatory attention on receiving water quality, is referred to as the "ambient standards" approach to environmental resource regulation.[8] The 1972 Act dramatically abandoned achievement and maintenance of ambient standards as the policy objective in favor of a national goal of restoring and maintaining the "chemical, physical, and biological integrity of the Nation's waters."[9] As a necessary corollary of this quest for natural water quality, the Act sets 1985 as a target date for the total elimination of pollutant discharges to water. Although ambient standards are retained and expanded, the Act relies principally upon effluent limitations as the tool for achieving the "no discharge" goal. Effluent limitations are regulatory con-

2. Robohm, *Major Problems of Water Pollution Created by Agricultural Practices*, in U.S. DEP'T OF INT., 2d COMPENDIUM OF ANNUAL WASTE MANAGEMENT 2 (1969).

3. *Id.* at 3.

4. IOWA STATE HYGENIC LABORATORY, PESTICIDE LEVELS IN FISH FOR IOWA STREAMS (Report No. 71-23, 1970).

5. Hines, *Agriculture: The Unseen Foe in the War on Pollution*, 55 CORNELL L. REV. 740 (1970).

6. 33 U.S.C.A. §§ 1251-1376 (Supp. 1974).

7. 33 U.S.C. § 466(a) (Supp. I 1965); Hines, *Controlling Industrial Water Pollution: Color the Problem Green*, 9 B.C. IND. & COM. L. REV. 553 (1968).

8. NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE, ch. 4 (1973); Hines, *Public Regulation of Water Quality in the United States*, in REPORT TO THE NAT'L WATER COMM'N 223-73 (1971).

9. Federal Water Pollution Control Act Amendments of 1972, § 101(a), 33 U.S.C.A. § 1251(a) (Supp. 1974).

trols which are imposed directly on the wastestreams of dischargers. Under the Act, effluent limitations are based primarily on considerations relating to technological and economic feasibility rather than on local water quality needs. A national permit system is created as the vehicle for translating the effluent limitations into specific requirements for each individual discharger.

The growing awareness of agriculture's role in the befouling of the nation's waters raises obvious questions about the extent to which the 1972 Act contains adequate measures for the control of agricultural pollution. It is the purpose of this article to examine the new Act and its implementation by the federal Environmental Protection Agency in relation to the identification, control and elimination of agricultural pollutants. First, a brief analysis of the 1972 Act will be presented. Then, employing the Act's differential treatment of point sources and nonpoint sources, the application of the Act to different types of agricultural pollutants will be explored. Finally, conclusions will be presented and some predictions advanced about the future directions to be taken in the control of agricultural pollutants.

AN OVERVIEW OF THE 1972 ACT

The enactment in October 1972 of the Federal Water Pollution Control Act Amendments[10] culminated nearly three years of congressional deliberations aimed at strengthening the nation's water quality programs. The 1972 Act opens by declaring the ambitious national goal "that the discharge of pollutants into the navigable waters be eliminated by 1985."[11] The basic mechanism created to achieve this broad policy objective is the National Pollutant Discharge Elimination System (NPDES) under which every discharge into navigable waters is required to obtain a permit from the Environmental Protective Agency (EPA) or from a state or interstate agency delegated permit program responsibility by EPA.[12] NPDES permits, which must be consistent with federal effluent limitation guidelines and standards set by EPA, control the type and quantity of discharge which will be allowed while the discharger is moving toward compliance with the clean-up schedule set out by the 1972 Act.[13]

This schedule of compliance requires all municipal dischargers to employ secondary treatment by mid-1977[14] and all industrial dischargers to use the "best practicable control technology currently available" by the same date.[15] Stricter effluent limitations will

10. Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C.A. §§ 1251-1376 (Supp. 1974).
11. 33 U.S.C.A. § 1251(a)(1) (Supp. 1974).
12. 33 U.S.C.A. §§ 1311(a), 1342 (Supp. 1974).
13. 33 U.S.C.A. § 1311 (Supp. 1974).
14. 33 U.S.C.A. § 1311(b)(1)(A) (Supp. 1974).
15. 33 U.S.C.A. § 1311(b)(1)(A)(i) (Supp. 1974).

be required for both industry and municipalities if the 1977 level of treatment is not adequate to meet ambient water quality standards.[16] Municipal dischargers must employ the "best practicable control technology" by mid-1983[17] and industrial dischargers must employ the "best available technology economically achievable" by the same date.[18] Here again, even stricter effluent limitations may be required after 1983 for individual dischargers when necessary to "assure protection of public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water . . . ."[19] As indicated above, the clean-up schedule is pointed toward elimination of all pollutant discharges by 1985. Uncertainty about the technological aspects and all of the aspects of the total economic, social and environmental effects of achieving or not achieving the 1983 and 1985 goals led to the creation of a National Study Commission to analyze these questions and report in 1975.[20]

The 1972 Act recognizes "the primary responsibilities and rights of states to prevent, reduce, and eliminate pollution."[21] As an initial step in the clean-up program, states are to expand existing interstate ambient water quality standards to cover all navigable waters.[22] The states are authorized to submit to the EPA a proposed program for implementing the NPDES program.[23] Generally, to be accepted, a state program must be equal in scope and effectiveness to the EPA program. The state program must enforce effluent limitations at least as strict as the federal guidelines set by the EPA,[24] provide an adequate monitoring and reporting system,[25] and allow legal enforcement in the state courts.[26] Approved state programs are subject to continuing review by the EPA and every application for a permit under a state program must be approved by the EPA to ensure compliance with the terms of the Act.[27] If a state's plan does not conform to the Act, the EPA retains control of the NPDES program for that state.[28]

A number of federal effluent limitations go beyond the basic section 301(b) compliance schedule. Industrial point sources constructed after 1972 must meet the 1983 standards of "best available

16. 33 U.S.C.A. § 1311(b)(1)(C) (Supp. 1974).
17. 33 U.S.C.A. §§ 1311(b)(2)(B), 1281(g)(2)(A) (Supp. 1974).
18. 33 U.S.C.A. § 1311(b)(2)(A)(i) (Supp. 1974).
19. 33 U.S.C.A. § 1312(a) (Supp. 1974).
20. 33 U.S.C.A. §§ 1325(a), (e) (Supp. 1974).
21. 33 U.S.C.A. § 1251(b) (Supp. 1974).
22. 33 U.S.C.A. § 1313 (Supp. 1974).
23. 33 U.S.C.A. § 1313(e)(2) (Supp. 1974).
24. 33 U.S.C.A. §§ 1313(a)(3)(A), 1314 (Supp. 1974); guidelines set under 33 U.S.C.A. §§ 1311(b), 1312 (Supp. 1974).
25. 33 U.S.C.A. §§ 1314(h)(1)(A), (B) (Supp. 1974).
26. 33 U.S.C.A. § 1342(b)(7) (Supp. 1974).
27. 33 U.S.C.A. § 1342(d)(1) (Supp. 1974). The EPA may, however, waive its right to review permits as to individual discharges or as to categories of discharges.
28. 33 U.S.C.A. § 1342(c)(3) (Supp. 1974).

demonstrated control technology,"[29] and all industrial users of municipal treatment works must comply with increasingly stringent pretreatment standards set by the EPA.[30] Section 307(a) requires the EPA to maintain a list of toxic substances with specific limitations geared to the characteristics of each substance. Finally, thermal effluent limitations are required under section 316. Together these effluent limitations and standards provide a floor for state plans and serve as the basis for the issuance of NPDES permits.

The 1972 Act provides numerous opportunities for the public to become informed and participate in NPDES. Public notice and an opportunity for public comment are given when the EPA tentatively approves a permit application.[31] States issuing permits must hold public hearings if there is substantial public interest, and affected persons may demand a full adjudicatory hearing under the Administrative Procedure Act when the EPA is the issuing body.[32] Citizen participation is encouraged in the "development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program" by the EPA and the states.[33] Documents made public include permit applications, detailed fact sheets on proposed discharges of over 500,000 gallons per day, and monitoring and compliance reports. Finally, section 505 authorizes citizen suits against polluters who are violating permits and orders and against the EPA for failure to perform nondiscretionary acts.[34]

Discharge of pollutants without a NPDES permit is unlawful, but the Act provides an exemption from prosecution until December 1974 for facilities which have filed a satisfactory permit application.[35] Enforcement of the 1972 Act is intended to be carried out by the states, but if a state's implementation plan for inspections, monitoring, and entry is not adequate, the EPA can assert control over these functions.[36] Even if a state's enforcement plan is approved, the EPA retains as back-up authorities a right of entry upon the premises,[37] power to issue administrative orders compelling compliance,[38] and power to initiate civil actions for injunctive relief and to collect civil penalties of up to $10,000 per day.[39] Criminal penalties for willful or negligent violation of permit conditions or discharge without a permit can be as high as $50,000 per day and two years imprisonment.[40] The Act also provides the EPA with emergency powers to seek injunctions where pollution is causing

29. 33 U.S.C.A. § 1316(a)(1) (Supp. 1974).
30. 33 U.S.C.A. § 1317(b)-(d) (Supp. 1974).
31. 33 U.S.C.A. §§ 1342(a)(1), (b)(3) (Supp. 1974).
32. 33 U.S.C.A. § 1342(b)(3) (Supp. 1974).
33. 33 U.S.C.A. § 1251(e) (Supp. 1974).
34. 33 U.S.C.A. § 1365 (Supp. 1974).
35. 33 U.S.C.A. § 1342(k) (Supp. 1974).
36. 33 U.S.C.A. § 1318(c) (Supp. 1974).
37. 33 U.S.C.A. § 1318(a)(B)(i), (ii) (Supp. 1974).
38. 33 U.S.C.A. § 1319(a)(3) (Supp. 1974).
39. 33 U.S.C.A. §§ 1319(a)(1), 1319(b), 1319(d) (Supp. 1974).
40. 33 U.S.C.A. § 1319(c) (Supp. 1974).

an imminent and substantial danger to the health or livelihood of affected persons.[41]

The 1972 Act requires states to develop a comprehensive and continuing planning process for water quality management to reduce pollution from both point and nonpoint sources.[42] Starting in 1975, the states are required to make annual reports assessing existing and anticipated water quality and proposing programs for the control of nonpoint sources of pollution.[43] The Act is bolstered by the appropriation of $18 billion over three years to provide a seventy-five percent federal share of the cost of municipal waste treatment facilities.[44] Subsequent executive action, however, has severely limited the availability of these funds.[45]

Application of the 1972 Act to Agricultural Pollutants

The general application of the Act to agricultural pursuits is made clear by the inclusion of "agricultural wastes" in the definition of the basic term "pollutant,"[46] however all agricultural wastes are not subject to the same types of regulation. Because the mainspring of the Act is the establishment and implementation of effluent limitations through NPDES permits, the basic thrust of the Act is directed toward identifiable point sources of pollution. Nonpoint sources are not ignored, but they presently receive minor attention compared to the elaborate and detailed provisions governing the control of point sources. Most of the agricultural pollutants reaching the nation's waterways do not emanate from point sources;[47] a significant volume, however, of agricultural wastes are capable of identification and control in respect to specific environmental entry points. Therefore, it seems appropriate in this discussion to follow the pattern of the Act by differentiating point source elimination techniques from nonpoint source control strategies.

Point Sources

The 1972 Act defines point source to mean

> any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concen-

41. 33 U.S.C.A. § 1364 (Supp. 1974).
42. 33 U.S.C.A. § 1313(e) (Supp. 1974).
43. 33 U.S.C.A. § 1315(b) (Supp. 1974).
44. 33 U.S.C.A. §§ 1282(a), 1287 (Supp. 1974).
45. For judicial reaction to the impoundment of construction grant funds *see* Campaign Clean Water v. Train, 489 F.2d 492 (9th Cir. 1973); New York City v. Train, 6 E.R.C. 1177 (D.C. Cir. 1974).
46. 33 U.S.C.A. § 1362(6) (Supp. 1974).
47. EPA, Methods for Identifying and Evaluating the Nature and Extent of Non-Point Sources of Pollutants 35 (1973) [hereinafter cited as Methods]. *Hearings on H.R. 15596 and Related Bills Before the Subcomm. on Conservation and Watershed Development of the House Comm. on Public Works*, 92d Cong., 2d Sess. at 105-108 (1972).

> trated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.[48]

From this definition it would appear reasonable to assume that besides the wastes from concentrated animal feeding operations, any other agricultural pollutant that reaches a waterway through specific and relatively discoverable routes would be regulatable as a point source. On many farms, land runoff is deliberately collected and transported in drainage tile ditches and waterways from which it is discharged into adjacent water bodies. Similarly, the environmental entry point of irrigation return flows is readily ascertainable. Nevertheless, EPA has ruled that many such agricultural activities ordinarily will not be regarded as point sources requiring NPDES permits.

A. *The Agricultural-Silvicultural Exclusion*

In the basic NPDES regulations first published May 3, 1973 and revised July 5, 1973, EPA expressly provided for the exclusion of

> [d]ischarges of pollutants from agricultural and silvicultural activities, including irrigation return flow and runoff from orchards, cultivated crops, pastures, rangelands, and forest lands, except that this exclusion shall not apply to the following:
>
> [(1), (2) & (3) deal with animal confinement facilities and aquatic animal production facilities]
>
> (4) Discharges of irrigation return flow (such as tailwater, tile drainage, surfaced groundwater flow or bypass water), operated by public or private organizations or individuals, if: (i) There is a point source of discharge (e.g., a pipe, ditch, or other defined or discrete conveyance, whether natural or artificial and; (ii) the return flow is from land areas of more than 3,000 continguous acres, or 3,000 noncontiguous acres which use the same drainage system; and
>
> (5) Discharges from any agricultural or silvicultural activity which have been identified by the Regional Administrator or the Director of the State water pollution control agency or interstate agency as a significant contributor of pollution.[49]

Note that the regulations do not deny that the excluded discharges emanate from point sources, but rather exclude these discharges from the NPDES permit requirement. The justification given for this general exclusion of most agricultural and silvicultural discharges is based chiefly on notions of administrative efficiency. As the comments accompanying the regulations explain, it is unreasonable, considering EPA's limited resources, to have to process NPDES applications for each of a possible three million

48. 33 U.S.C.A. § 1362(14) (Supp. 1974).
49. 38 Fed. Reg. 18003 (1973).

small farmers who might be making some negligible discharge into navigable waters.[50] Similarly, commercial silviculture is conducted on over 400 million acres, with about seven million acres undergoing intensive harvest each year. EPA claims that section 402(a)(1) of the Act gives the Administrator authority to exclude insignificant point source dischargers from the requirements of NPDES. The applicable language provides that, prior to taking all the implementing actions in establishing guidelines and standards, the EPD administrator "may" issue a permit "under such conditions as the administrator determines are necessary to carry out the provisions" of the act. Further, the agency asserts that the legislative history of the Act clearly indicates that Congress intended argicultural and silvicultural activities of the type excluded to be handled primarily through resort to powers to control nonpoint sources.[51] Finally, EPA stresses that exception (5), which applies NPDES to any agricultural or silvicultural activity which is actually identified as a significant source of pollution, safeguards against serious water quality deterioration from these sources.

Exception (4), regarding irrigation return flows which empty into navigable waters from discrete outlets, is similarly based on a balance between significant pollution potential and administrative feasibility. It is estimated that the cutoff point of 3000 contiguous acres or 3000 noncontiguous acres using a common drainage system will bring within the permit requirements eighty percent of the land currently irrigated by irrigation organizations.[52] One matter of confusion that has arisen under this exception concerns who must apply for a NPDES permit, the supplier of irrigation water or the user. The regulations indicate that it is the person who controls the return flow who must apply for a permit.[53] Thus, a farmer who controls the return flows from an irrigation system which irrigates 3000 or more acres of contiguous or noncontiguous land must file for a NPDES permit regardless of who supplies the irrigation water. On the other hand, where a farmer has 3000 or more acres irrigated by an organization which also controls the return flows, the organization and not the farmer is responsible for applying for the permit.

The agricultural exclusion and EPA's reasons for it have drawn fire from both congressional critics and environmental activists. Both the Administrator's authority to grant the exclusion and the correctness of EPA's reading of the legislative history have been challenged. Exhibits presented to the Subcommittee on Conservation and Natural Resources of the House Committee on Government Operations (at hearings concerned mainly with regulation of confinement feedlots) revealed legislative history showing that, at least on the Senate side, it was contemplated that farm drainage

50. 38 Fed. Reg. 18000 (1973).
51. *Id.*
52. 38 Fed. Reg. 18001 (1973).
53. 38 Fed. Reg. 18003-04 (1973).

pipes and ditches would be regulated as point sources.[54] The Subcommittee also questioned the Administrator's claim of power under the Act to grant the exclusion, urging that any discretion intended to be allowed must concern questions of relative seriousness of the discharges in issue and not mere administrative inconvenience in dealing with them.[55]

At these hearings, the EPA defended its policy and noted that these discharges were not being excused from regulation entirely, but only from the requirement of obtaining a NPDES permit. The excluded discharges must still comply with all other regulatory provisions of the Act, most notably those sections relating to the enforcement of water-quality-related effluent limitations and standards. Thus, agricultural and silvicultural discharges made without a NPDES permit may be unlawful under section 301(a) and subject to enforcement action if they do not comply with applicable effluent limitation guidelines, standards of performance, toxic effluent standards and pretreatment standards.[56] If a discharge cannot meet such guidelines and standards, the discharger will have to apply for a NPDES permit to legalize his activity. It should be clear that the regulation granting the exclusion in no way restricts voluntary application for a NPDES permit by agricultural or silvicultural dischargers.[57]

The criticism from environmental groups culminated in a lawsuit filed against EPA by the Natural Resources Defense Fund (NRDF).[58] The suit, filed in August 1973, sought a declaratory judgment that the Administrator lacked discretion to exclude the agricultural dischargers from NPDES permit requirements or that, if such discretion was authorized, the Administrator's actions constituted an arbitrary and capricious abuse of discretion.[59] EPA filed a motion to dismiss this action in November 1973 supported by a lengthy memorandum of points and authorities. The memorandom argued that EPA did indeed have authority under the permissive language of section 402(a) ("the Administrator may . . . issue a permit") and that the Administrator's decision to exercise the discretion in excluding certain agricultural dischargers had a rational basis because the permit program is ill-suited to deal with them effectively.[60]

---

54. *Hearings on Control of Pollution from Animal Feedlots Before the Subcomm. on Conservation and Natural Resources of the House Comm. on Government Operations*, 93d Cong., 1st Sess. at 708 n.15 (1973) [hereinafter cited as *Hearings*].

55. *Id.* at 1-4.

56. 33 U.S.C.A. §§ 1311, 1312, 1316, 1317 (Supp. 1974).

57. 38 Fed. Reg. 18002 (1973).

58. Natural Resources Defense Council v. EPA, Civil No. 1629-73 (D.D.C., filed August 17, 1973, amended October 19, 1973). Complaint printed in *Hearings, supra* note 54, at 172-91.

59. *Hearings, supra* note 54, at 172-91.

60. *Id.* at 710-19.

At this writing, the litigation is still pending and Congress has shown no inclination to tamper with the legislative provisions under which EPA's regulations were issued. For its part, EPA has recently reaffirmed its resolve to adhere to its policy toward the agricultural exclusions.[61] Insofar as it relates to agricultural discharges other than from animal confinement facilities, the agricultural exclusion seems not only reasonable but necessary, at least at this stage in the development of the NPDES permit system. It is difficult to see a real policy justification in requiring millions of farmers to apply for NPDES permits for each culvert, drain tile, irrigation ditch or pipe, terrace and gully that might discharge pollutants into nearby waters. Enforcing such a requirement seems particularly unrealistic in light of the current absence of practical "end of pipe" treatment alternatives for eliminating the pollutants typically discharged from such sources.

B. *The Feedlot Controversy*

1. The Problem

To satisfy the increasing consumer appetite for meat, many livestock producers have abandoned traditional open-pasture feeding methods in favor of confinement-feeding operations in which animals are scientifically fed and managed in tightly restricted pens or lots. Thousands of these mechanized meat factories have been built in the past decade across the farm belt, and government estimates project continued expansion.[62] Today roughly one billion tons of animal wastes are generated in the nation's approximately two million cattle, swine, sheep and poultry feedlots.[63] Because feeding technology has outraced waste management control, feedlot runoff is rated as a major pollution problem in most Cornbelt and Great Plains states.[64]

Wastes from such feedlots can pollute waters into which they are discharged in at least three ways.[65] First, feedlot wastes exert a much heavier biochemical oxygen demand (BOD) on receiving waters than does sanitary sewage, and can cause serious oxygen depletion of streams. Secondly, feedlot wastes ordinarily contain substantial amounts of nitrogen which, in heavy concentrations, can be

---

61. 4 Envir. Rep. 1425 (Current Developments, 1973).

62. *See* U.S. DEP'T OF AGRICULTURE, CONTROL OF AGRICULTURAL-RELATED POLLUTION 25 (1969).

63. METHODS, *supra* note 47, at 36.

64. *See* Rademacher, *Animal Waste Pollution—Overview of the Problem* in FEDERAL WATER POLLUTION CONTROL ADMIN., U.S. DEP'T OF INT., PROCEEDINGS OF ANIMAL WASTE MANAGEMENT CONF. 25-32 (1969) [hereinafter cited as PROCEEDINGS].

65. *See* LOEHR, POLLUTION IMPLICATIONS OF ANIMAL WASTES—A FORWARD ORIENTED REVIEW (1968). *See also* Miner & Willrich, *Livestock Operations and Field-Spread Manure as Sources of Pollutants*, and Diesch, *Disease Transmission of Water-Borne Organisms of Animal Origin*, in AGRICULTURAL PRACTICES AND WATER QUALITY 231-35, 265 (T. Willrich & G. Smith eds. 1970).

toxic to aquatic life and in lesser amounts can act as a nutrient to undesirable aquatic vegetation, thus hastening eutrophication. Finally, the high bacterial level of feedlot wastes creates the possibility of contaminating water with organisms pathogenic to man and other animals. In addition to these polluting factors, feedlot wastes reaching surface waterways cause such aesthetically unpleasant results as discoloration, noxious odors, and bad taste. Under certain conditions, feedlot wastes also pose a pollution threat to underground water supplies, but such pollution is not regarded as a serious problem.[66]

Management of agricultural wastes poses two related problems. First, drainage from the feedlot area must be contained and treated in some manner before it can be permitted to discharge into a watercourse. Secondly, accumulated solid animal wastes from the feedlot must be disposed of. Stockpiles of wastes attract vermin, create possible air quality problems, and increase the danger of water pollution. The pollution potential of animal wastes is greatest when they are allowed to accumulate or to be stored on the ground surface where rainfall and running water can reach and transport the material as surface runoff or soil infiltrate.

Water pollution from feedlot runoff is an intermittent problem mainly associated with times of heavy rainfall or rapid snowmelt, when large slugs of fecal material may wash into nearby waterways. To date, methods of controlling and treating feedlot runoff rely almost exclusively on natural processes. Runoff is collected and held in a pond or lagoon or a series of such basins. Some biological degradation occurs, but the disposal design ordinarily contemplates reduction of the liquids through irrigation, evaporation or seepage plus periodic removal of the precipitated solids. To prevent overloading of the retention basins, good waste management procedures call for prompt pumping out of the liquid effluent for disposal on land surfaces through irrigation techniques.[67] A further difficulty now being recognized is that without careful management, broad-scale surface spreading of animal wastes may simply convert an overt point source of pollution to a more subtle nonpoint source. Diffused surface runoff from organically fertilized agricultural land has been identified as a major pollution source in some areas.[68]

Because the potency of the effluent from a lagooning process is too great for direct discharge into receiving waters, consideration

66. *See* Letter from USDA to House Subcomm. on Conservation and Natural Resources, printed in *Hearings*, *supra* note 54, at 813-15.

67. *See* O'Brien, *Control Devices for Animal Feedlot Runoff*, in PROCEEDINGS, *supra* note 64, at 18; BUTCHBAKER, GARTON, MAHONEY & PAINE, EVALUATION OF BEEF CATTLE FEEDLOT WASTE MANAGEMENT ALTERNATIVES (1971).

68. *See* METHODS, *supra* note 47, at 36.

has been given to applying conventional waste treatment techniques used to purify municipal sewage and high BOD industrial wastes. No system has yet been discovered that yields a satisfactory feedlot runoff effluent at a reasonable cost.[69] Although recent proposals to convert animals' wastes into fuel have received considerable publicity, experiments in producing a commercially useful product from agricultural wastes generally have met with little success.[70] Nonsalvage disposal methods, such as incineration and landfill, have also proved ill-suited to agricultural wastes.[71] Nearly all waste management experts agree that the time-honored technique of returning animal wastes to the soil through surface spreading is still the best available disposal procedure. However, such constraints as seasonal restrictions on land spreading, competition with expanding recreation demands, and production of odors offensive to advancing urban populations restrict use of this method in a growing number of areas. Thus, a once-valuable production input has become a nonproductive cost item, and in the process a waste disposal problem of immense dimensions has been created.

2. EPA's Wavering Response

Because the 1972 Act specifically includes "concentrated animal feeding operation[s]" within the definition of "point source"[72] and subjects all point sources to the effluent limitation requirements of sections 301 and 302, the performance standards of section 306 and the toxic and pretreatment standards of section 307, EPA was required to issue guidelines and standards for feedlot effluent limitations under section 304 and to make provision for the control of feedlot wastes through the NPDES permits under section 402. EPA's initial attempt to meet its regulatory obligations respecting animal feedlots was issued December 5, 1972 in the form of proposed application forms and permit guidelines for compliance with NPDES.[73] These hurriedly prepared proposals seemingly required

69. *See* FEDERAL WATER POLLUTION CONTROL ADMIN., U.S. DEP'T OF INT., THE COST OF CLEAN WATER AND ITS EONOMIC IMPACT 210-11 (1969).

70. *See* Willrich, *Disposal of Animal Wastes*, in AMERICAN ASS'N FOR THE ADVANCEMENT OF SCIENCE, AGRICULTURE AND THE QUALITY OF OUR ENVIRONMENT 415-16 (N. Brady ed. 1967). One experimenter has concluded: "It appears most doubtful that processing and retailing animal manure will soon, if ever, constitute a really significant channel of disposition." *Id.* at 416 (quoting G.L. Mehren). However, a 1971 study conducted for EPA concluded that the solid portion of animal waste might be usable as a feed implement for livestock and recommended "intensive future investigation" of this possibility. NGODDY, CLOSED SYSTEM WASTE MANAGEMENT FOR LIVESTOCK (1971).

71. Most animal wastes have a high moisture content and do not burn well unless thoroughly dried. Also, burning large quantities of animal wastes is likely to present air pollution problems. Sanitary landfills and using animal wastes as fill to reclaim marginal land have been found unsatisfactory as disposal methods because of the cost associated with hauling and dumping and the potential for groundwater pollution. Willrich, *supra* note 70, at 417.

72. 33 U.S.C.A. § 1362(14) (Supp. 1974).

73. 37 Fed. Reg. 25898 (1972).

every farmer in the country to apply for a NPDES permit. They were severely criticized by the United States Department of Agriculture (USDA), farm organizations, state pollution control agencies, and members of Congress from farm states.[74] After extensive review of the comments received, substantially revised regulations were promulgated on July 5, 1973.[75] On September 7, 1973 EPA issued its proposed effluent limitation guidelines for existing feedlots and standards of performance and pretreatment standards for new facilities.[76] Again, numerous criticisms and suggestions were received, the comment period was extended and the agency review continued until the final regulations were promulgated February 14, 1974.[77] Both the NPDES regulations and the effluent limitation guidelines have attracted sufficient critical attention to merit further examination.

(a) The NPDES Regulations

Under the current regulations governing the issuance of NPDES permits either by EPA or by a state whose permit program has qualified for delegation of permit-issuing authority under section 402(b), the general exclusion for agricultural and silvicultural activities shall not apply to

> (1) Discharges from animal confinement facilities, if such facility or facilities contain, or at any time during the previous 12 months contained, for a total of 30 days or more, any of the following types of animals at or in excess of the number listed for each type of animal:
>
> (i) 1,000 slaughter and feeder cattle;
> (ii) 700 mature dairy cattle (whether milkers or dry cows);
> (iii) 2,500 swine weighing over 55 pounds;
> (iv) 10,000 sheep;
> (v) 55,000 turkeys;
> (vi) If the animal confinement facility has continuous overflow watering, 100,000 laying hens and broilers;
> (vii) If the animal confinement facility has liquid manure handling systems, 30,000 laying hens and broilers;
> (viii) 5,000 ducks;
>
> (2) Discharges from animal confinement facilities, if such facility or facilities contain, or at any time during the previous 12 months contained, for a total of 30 days or more, a combination of animals such that the sum of the following numbers is 1,000 or greater the number of slaughter and feeder cattle multiplied by 1.0 plus the number of mature dairy cattle multiplied by 1.4, plus the num-

74. *See Hearings, supra* note 54, at 81-144.
75. 38 Fed. Reg. 18000 (1973).
76. 38 Fed. Reg. 24466 (1973).
77. 39 Fed. Reg. 5704 (1974).

ber of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1;

(3) Discharges from aquatic animal production facilities.[78]

Although the early resistance to EPA's NPDES regulations governing feedlots centered on problems of overinclusiveness, nearly all of the recent controversy has revolved around the claim by environmentalists in Congress and elsewhere that the cutoff levels established by the regulations exclude too many serious pollution sources. In the face of a congressional investigation[79] and an environmental lawsuit,[80] EPA has steadfastly defended its 1000-head cutoff point for feeder cattle and the corollary waste equivalent figures for other animals and poultry.

As presented in the regulations, in the subcommittee hearings, and in its response to the NRDF suit, EPA's justifications for its NPDES regulations spring chiefly from a concern to restrict to manageable proportions the magnitude of its responsibilities in the initial round of permit issuing and review by concentrating attention on the most serious pollution problems. EPA expects a total of approximately 65,000 permit applications from all other sources excluding agriculture.[81] Considering the approximately 1.5 to two million animal feedlots that theoretically are classified as point sources by the Act, it is obvious that the permit process would be overwhelmed unless an exclusion were granted to a substantial number of potential applicants. Any cutoff level is somewhat arbitrary; the 1000-head level picked by EPA was selected after consultation with USDA and other agricultural interests and was determined to be the breaking point separating the large commercial operation from the smaller family unit.[82] The 1000-head cutoff brings within the permit system an estimated 2100 feeder cattle feedlots accounting for sixty-two percent of the cattle produced. Waste equivalent cutoffs for other types of livestock and poultry will require permit application from approximately 308 dairy cattle operations, 786 hog feedlots, 116 sheep feedlots, 450 turkey lots, 1000 layer and broiler chicken lots, and, effectively, all 150 duck feeding operations.[83] Thus, a total of nearly 5000 permit applications are expected from concentrated animal feeding operations.

EPA also points out that feedlots below the cutoff level are not exempted from other regulations. Any feedlot which has or will be identified by EPA or by a state program as a significant contributor of pollution is expressly required to obtain a NPDES permit.[84] Furthermore, only the requirement to apply for a permit

78. 39 Fed. Reg. 5706-07 (1974).
79. *See Hearings, supra* note 54.
80. *See* case cited note 58 *supra.*
81. *Hearings, supra* note 54, at 720-21.
82. *See id.* at 712.
83. *Id.* at 713-14.
84. 39 Fed. Reg. 5706-07 (1974).

is being relaxed; all of the other point source requirements of the Act are still in effect and may be enforced against a feedlot discharger.[85] Any feedlot owner who desires to clarify the status of his operation under the Act is free to apply for a NPDES permit.[86]

Critics of the EPA rules question the authority of the Administrator to exclude any known point sources from the requirements of NPDES and particularly challenge the exclusion of feedlots of such a size as to create a high likelihood of pollution problems.[87] Even conceding that EPA has the discretion to move against polluters in stages, tackling the most serious problems first, congressional watchdogs dispute the justification for the 1000-head cutoff. Materials prepared for the subcommittee hearings on the issue demonstrated that the cutoff level could be lowered by 50-70% without incurring the kind of dramatic increase in applications claimed by EPA in its explanation of the regulations.[88] Although USDA officially supports the EPA position, its original recommendation was for a 300-head cutoff.[89] Legislative history is frequently cited to demonstrate that Congress anticipated that any feedlot directly discharging wastes into navigable waters should be subject to the permit requirement without regard to its size.[90]

Perhaps the most persuasive argument against EPA's 1000-head cutoff is the actual regulatory practices of the states in which feedlot pollution is a serious problem. Nearly all such states, which now have, or eventually will receive, the delegation of primary responsibility for the NPDES program, utilize much lower cutoff figures.[91] Additionally, typical state feedlot regulations specifically advert to local conditions which make water pollution more likely, such as proximity to a waterway, soil and slope characteristics and the existence of natural or artificial drainage structures.[92] State officials testifying at the subcommittee hearings expressed serious concern that EPA's regulations would lead to a retrenchment in the pollution control programs of the states with tougher requirements.[93]

In evaluating the pros and cons of EPA's feedlot permit regulations, several factual issues loom large. First, is it true that any

85. 38 Fed. Reg. 18001-02 (1973).
86. *Id.* at 18002.
87. *See Hearings, supra* note 54, at 188-91.
88. *Hearings, supra* note 54, at 136-40.
89. Letter from USDA to EPA of January 10, 1973, printed in *Hearings, supra* note 54, at 873.
90. *See Hearings, supra* note 54, at 708-09.
91. *See, e.g.,* Indiana (300), Iowa (100), Nebraska (all), and North Dakota (300), regulations summarized in *Hearings,* supra note 54, at 1072, 1084, 1142, 1181.
92. *See, e.g.,* Iowa Department of Environmental Quality, Water Quality Comm'n Rules and Regulations on Confined Feeding Operations, in *Iowa Departmental Rules* § 16.3(455B) at 287 (1973), prescribing regulations where the feedlot is less than 200 feet from the watercourse per 100 animals.
93. *Hearings, supra* note 54, at 237.

feedlot operation which is smaller than the 1000-head cutoff and is causing significant pollution will be identified by state or federal control officials and thereby brought within the permit framework? In states with well-developed feedlot waste control programs, this is very likely to be true; for states without such programs it seems doubtful. Most states with significant numbers of confinement-feeding operations also have reasonably aggressive feedlot waste control programs, so perhaps EPA's position is sound on this point.

A second relevant question is, what is likely to happen to the pace of feedlot regulation in states with stricter permit requirements than EPA? If these states continue to enforce their own criteria for permit application to local feedlots and subject applicants to at least as strict effluent limitations as EPA requires under NPDES, the EPA regulations will have a minimal impact on the actual regulatory pressure brought to bear against polluting feedlots. On the other hand, if, as several state officials predict, the EPA rules will ultimately lead to a relaxation of state requirements because the political pressure for conformity with the federal policy will be irresistible, substantial harm could be done to local efforts to clean up feedlot pollution. In light of the current cost-price squeeze in the animal feeding industry, the threat of such politically inspired retrenchment seems real indeed.

A final inquiry concerns the likely impact of the present EPA rules on feedlot operators not currently required to apply for NPDES permits. What is the likelihood that persons in this class will begin to take needed steps to bring their discharges into conformance with the applicable effluent limitations and standards in the absence of pressure to conform to a NPDES permit? It is submitted that the uncertainty inherent in the current situation provides a great incentive for the excluded feedlot operator to do nothing until he is specifically instructed as to his legal responsibilities. Threat of possible prosecution for violation of section 301 or section 302 of the Act is a slim reed upon which to build hopes of voluntary initiation of pollution control measures. Most small feedlot owners probably do not know of the new law; if they did know, they probably could not decipher its complicated provisions; and if they knew and understood, they probably would still feel justified in deferring any expenditures for pollution control until directed to do so by someone in a position of authority. And rightly so, from every standpoint except that of an altruistic environmentalist.

One strong feature of a permit system is that it communicates the law's requirements to each affected discharger in a direct and individualized fashion.[94] Armed with the permit, the discharger

94. Hines & Schantz, *Improving Water Quality Regulation in Iowa*, 57 IOWA L. REV. 231, 274-77 (1971).

is safe to plan and implement his waste control program secure in the knowledge that he is carrying out his legal responsibilities. As one witness at the subcommittee hearings expressed the point, "The permit is . . . the process where EPA translates the generalized guidelines, the obscure studies, into specific targets and specific time schedules for reaching those targets . . . . The farmer can then say, 'Here is what I have to do and when I have to do it.' "[95] If confinement feedlots are point sources requiring case-by-case regulation under a permit system, as the 1972 Act seems clearly to contemplate, the sooner the NPDES permit requirements are applied to them the sooner they are likely to begin moving toward the 1977 and 1983 goals.

Recognizing EPA's administrative burdens, the census figures produced in the subcommittee hearings demonstrate that the numerical cutoff level can be substantially lowered without swamping the agency with applications from operations truly inconsequential in size. The 300-head cutoff originally recommended by the USDA appears to be a breaking point more readily defensible on administrative efficiency grounds. Beyond lowering the numerical threshold, EPA should also modify the NPDES rules to require a permit application from every feedlot that is located immediately adjacent to navigable waters or which discharges directly into such waters, whether by natural or artificial means. Legislative history clearly supports this expansion of the permit requirement[96] as does any minimal sense of commitment to protecting the quality of the nation's waters. The states seem to have experienced little difficulty in administering more complex proximity criteria.[97] Such an addition could be reflected in a simple modification of the application form.

(b) The Effluent Limitations

The effluent limitation guidelines for existing sources and standards of performance and pretreatment standards for new sources promulgated by EPA on February 14, 1974 differed only slightly from the proposals issued on September 7, 1973. The definition of "feedlot" is extremely broad and includes "concentrated, confined animal or poultry growing operation . . . wherein the animals or poultry are fed at the place of confinement and crop or forage growth or production is not sustained in the area of confinement."[98] The definitions of "process waste water" and "process generated waste water" make clear that the regulations apply to all flows escaping feedlot areas whether running off naturally or through deliberate or accidental discharge. The regulations divide feedlots into two categories, A and B. Category A includes

95. Statement of Richard M. Hall, in *Hearings, supra* note 54, at 145.
96. *See Hearings, supra* note 54, at 708-09.
97. *See Hearings, supra* note 54, at 281.
98. 39 Fed. Reg. 5706-08 (1974).

all feedlots except duck feeding operations and category B consists of duck feeding operations. Identical effluent limitation guidelines and standards are applied to all category A operations, with duck feeding operations being subjected to different requirements.[99]

"No discharge" is the pollution control standard uniformly applied to handling the wastes of all feedlot animals and poultry except ducks.[100] Until 1977, existing duck feeding operations are allowed to discharge limited amounts of organic wastes, but thereafter they too are subject to the no discharge rule.[101] Because of the potency of feedlot wastes and the relative ease with which they can be controlled with conventional detention facilities, the immediate imposition of a no discharge requirement was not surprising. Existing state regulations of feedlots determined to be actual or potential sources of pollution ordinarily require complete containment of feedlot waste water.[102]

In both the effluent limitations and in the standards of performance, an exception is provided for discharges that result from the overflow of a control facility caused by chronic or catastrophic rainfall events. The only difference between the guidelines for "best practicable control technology currently available" and "best available technology economically achievable" is that, in the former case, control facilities must be designed to contain all process waste water plus the runoff from the heaviest rainfall likely to occur in the region within a twenty-four hour period once every ten years, while the latter requires facilities adequate to contain process waste water plus the heaviest twenty-four hour rainfall likely in a twenty-five year period.[103] The standard of performance for new sources is identical to the effluent limitation guideline for best available technology economically achievable.

The pretreatment requirements are still somewhat unsettled. While prohibiting any incompatible wastes in discharges by new sources to public treatment systems, EPA issued proposed standards which would allow the introduction of feedlot wastes from *existing* operations into public treatment systems without pretreatment.[104] Because it is a rare case where a feedlot can discharge its waste water into a public waste treatment system, this does not appear to be a distinction that merits further comment.

Two points covered in the explanation accompanying the final regulations deserve mention. First, the stated intent of EPA was to avoid the establishment of operating criteria for feedlot waste control facilities. The regulation provides effluent guidelines and

99. 39 Fed. Reg. 5706 (1974).
100. 39 Fed. Reg. 5706-07 (1974).
101. 39 Fed. Reg. 5708 (1974).
102. *See Hearings, supra* note 54, at 1018-1247.
103. 39 Fed. Reg. 5706-08 (1974).
104. 39 Fed. Reg. 5709 (1974).

performance standards with the clear understanding that the feedlot operator is free to choose any method of pollution control that will yield the specified results.[105] Secondly, it was explained that the regulations deliberately omitted the specification of requirements or procedures covering the dewatering or emptying of feedlot runoff containment facilities. EPA noted that several commentators had suggested such a provision, but stated that in its view specific dewatering requirements unnecessarily restricted the flexibility needed to properly control runoff for the vast variety of sites which exist throughout the nation.[106]

An interesting variance provision is included in the effluent guidelines. An individual discharger or other interested person is allowed to submit evidence to regulatory authorities that the equipment, facilities, process or other relevant factors related to the specific discharge in issue are "fundamentally different" than the factors on which the guidelines are based. If the regulatory agency finds that such factors involved are fundamentally different, a permit prescribing effluent limitations stricter or less strict than the guidelines may be issued. Any such variance requires the approval of the Administrator of EPA. As explained by EPA, the intent of this special procedure is to provide flexibility in the application of the guidelines to special circumstances that may not have been adequately accounted for when the regulations were developed. Although a moderately flexible approach to the administration of effluent guidelines seems reasonable, it is difficult to understand why such a policy was initiated in the feedlot regulations, which are the epitomy of simplicity. EPA has indicated that it expects the variances will be rarely granted.[107]

The one controversial change appearing in the final regulations relates to the applicability of the limitations and standards. As originally proposed, the regulations applied to all feedlots as that term was liberally defined.[108] This proposal drew an outpouring of protest from farm groups who claimed it was not appropriate to apply the same requirements to the largest and the smallest feedlot operations. In the final version, EPA responded to these complaints by expressly limiting the applicability of the regulations to the feedlot operations as large or larger than those required to apply for permits under the numerical criteria of NPDES regulations.[109] In promulgating the final regulations, EPA explained that information received during the public comment pe-

105. 39 Fed. Reg. 5704-05 (1974).
106. 39 Fed. Reg. 5705 (1974).
107. 39 Fed. Reg. 5707 (1974); *See* EPA, ENVIRONMENTAL NEWS 6, March 1974.
108. *See* 38 Fed. Reg. 24468-69 (1973). According to one skeptical environmentalist, as defined by EPA, a feedlot is "any place that two cattle get together and would eat the grass up if they stayed there too long." *Hearings, supra* note 54, at 146.
109. 39 Fed. Reg. 5706-07 (1974).

riod indicated that differential economic impacts of pollution controls on different sized feedlot operations may require a further segmentation of the industry on the basis of size.[110] The agency was reported to be in the process of reviewing detailed economic impact information and stated that, if it was determined that different effluent limitations and standards were appropriate for small units, they would be proposed soon.

EPA's decision to temporarily exempt from the effluent limitation guidelines and standards all feedlots of a size below the NPDES cutoff levels raises two important questions. First, what effluent limitations and standards will be applied to feedlots which are smaller than the numerical cutoffs, but which either voluntarily apply for NPDES permits or are required to obtain such permits by reason of their identification by a local or federal agency as a significant source of pollution? Neither the regulations nor the accompanying explanation cover this point. Presumably, EPA would apply the published guidelines and standards to all applications for NPDES permits until such time as different regulations are proposed for smaller units. Whatever the policy is to be, it would be helpful to would-be applicants to have it clarified.

The second question goes to the heart of EPA's justification for limiting the application of the recently published guidelines and standards. Is it correct to assume that compliance with the new regulations will have such a serious economic impact on smaller feedlot operators as to require less restrictive effluent limitations and standards? The only feedlots affected by the federal regulations will be those which are actually discharging into navigable waters or potentially may do so. The strength of feedlot wastes as a water pollutant necessitates its complete control and thus the conventional regulatory posture is one of no discharge except under extraordinary conditions of precipitation. This is the requirement ordinarily imposed against all sizes of feedlots by state feedlot control programs.[111] This is also the requirement imposed under the new federal regulations on large feedlots.

Feedlot discharges are commonly controlled through the construction of land retention structures, with the size of the facility roughly proportionate to the waste load it must confine.[112] Recognizing economies of scale available to larger units and conceding that smaller feedlots will likely have less investment capital available to commit to pollution control facilities, it nevertheless would seem to require a showing of severe economic impact on smaller feedlots to justify a pollution control requirement more lenient than the no discharge policy announced in the current regulations.

---

110. 39 Fed. Reg. 5706 (1974).
111. *See Hearings, supra* note 54, at 1018-1247.
112. *See* BUTCHBAKER, *supra* note 67.

If EPA has reason to believe that such severe economic impacts are likely to result from enforcement of the existing guidelines and standards,[113] it should issue less stringent regulations from smaller feedlots. But if, as environmental critics contend,[114] the economic impact is within acceptable bounds, EPA should apply uniform guidelines and standards to all feedlots and get on about the business of issuing the necessary permits.

C. *Applying for a Permit*

Suppose a farmer operates a feedlot or a large irrigation system that he believes falls within the NPDES permit requirement. How does he obtain a permit? The first step is to locate the appropriate application form. In the case of an agricultural discharger, the proper form is Short Form B-Agriculture.[115] This form is available from either the state water pollution control agency or the regional office of EPA. The current permit application form for agriculture is a much shorter and simpler version of the document that drew a hail of criticism when first published in late 1972.[116] The form itself is five pages in length with four pages of instructions and is segmented to allow the recording of information about general characteristics of the farming operation as well as specific facts concerning discharges from feedlots fish and aquatic production facilities and irrigation return flows. When completed, the form is returned to EPA or the state agency, as appropriate, along with a $10 application fee.[117]

From this point forward, the application is processed in nearly the same fashion whether handled by the EPA or by a state agency which has been delegated responsibility for the NPDES program. Assuming for discussion purposes that the application is returned to the state agency, it is reviewed and additional information may be requested or an on-site inspection may be conducted. A copy of the application is sent to EPA and to any federal agency and any other state which may be affected by the discharge. On the basis of all information received, the state then makes a preliminary decision about whether to issue or deny the permit. EPA must be sent a copy of any permit the state proposes to issue.

Any permit issued must specify what pollutants may be dis-

---

113. *See generally* VAN ARSDALL & J.B. JOHNSON, ECONOMIC IMPLICATIONS OF WATER POLLUTION ABATEMENT IN FAMILY FARM LIVESTOCK PRODUCTION (1972).

114. *See* Blitzer, *Economic Impact of Pollution Control: Dairy and Beef Feedlots*, in *Hearings, supra* note 54, at 159-71.

115. EPA Form 7550-7A (7-73) (1973).

116. 37 Fed. Reg. 25898 (1972); *see Some Confusion, Unhappiness Seen Over U.S. Water Rules*, Des Moines Register, December 20, 1972 at 6, col. 1.

117. The $10 fee covers each application regardless of how many point sources of pollution are reported by an applicant. *See* EPA, TOWARD CLEANER WATER: THE NEW PERMIT PROGRAM TO CONTROL WATER POLLUTION 8-11 (1974) [hereinafter cited as PERMIT PROGRAM].

charged and set average and maximum daily limits as needed to meet applicable effluent limitations and standards, water quality standards and any other federal or state requirements. If the discharge is not in compliance with all applicable standards and effluent limits, the permit must prescribe specific steps to bring the discharge in compliance with the relevant 1977 objectives. Where such compliance will not be achieved within nine months, the permit must set out a compliance schedule with one or more interim target dates by which specific actions will be taken. The permit will also set forth any monitoring responsibilities placed on the discharger and will recite the basic statutory conditions to which the permit is subject.

When it has tentatively decided to issue a permit, the state agency must give public notice of the proposal and provide an opportunity for a public hearing. At least thirty days must be allowed for comments and requests for a public hearing before the state can finalize its decision on the permit. If it decides to issue the permit, its action is subject to review by EPA.[118] If EPA objects, the permit cannot be issued. If the state and EPA concur on the issuance of the permit, it is issued for a term not to exceed five years.

Nonpoint Sources

> I am deeply concerned that this matter of feedlot regulations has been in the public mind equated totally with agricultural pollution. Now, if we closed every feedlot . . . tomorrow or they had no discharge whatsoever, the total effect on agricultural pollution in our State would be so infinitesimal that we would not even know it. . . . [T]he one limiting factor in aquatic life and recreational use . . . results from pollution by runoff from agricultural land. This does not seem to be recognized by Congress or by the EPA. All our research indicates that these pollutants which involve, of course, animal manures, organic residue of crops, insecticides, and pesticides, all come into our streams by adhesion to soil parcels due to soil erosion.[119]

In striking contrast to the controversial exercise of the federal role under the 1972 Act in regard to the control of point sources of agricultural pollution, EPA's performance of its duties toward nonpoint sources has gone practically unnoticed. There is good reason for this phenomenon—EPA's responsibilities with respect to nonpoint sources are virtually nonexistent. The only direct federal

---

118. "EPA may waive its right to review certain permit applications submitted to a state by individual dischargers or by categories of dischargers. Sources of discharges thus exempt from EPA review in the permit process are spelled out in regulations issued by EPA when it approves a state permit program." PERMIT PROGRAM, *supra* note 117, at 11. 33 U.S.C.A. § 1342(d)(3) (Supp. 1974).

119. Statement of Robert Buckmaster, Iowa Water Quality Comm'n, in *Hearings, supra* note 54, at 255.

action required by the Act is the development of information on (1) means for identifying and evaluating the nature and extent of nonpoint sources of pollution and (2) processes, procedures and methods to control such nonpoint sources.[120] The Act specifically directs the investigation of nonpoint pollution resulting from "agricultural and silvicultural activities, including runoff from fields and crop and forest land."[121] Initial reports fulfilling this requirement, which were required to be issued within one year after enactment of the Act, were published during the latter part of 1973.[122] Beyond this one explicit task assigned to EPA, the remainder of the Act's scant provisions concerning nonpoint sources place responsibilities on the states.

Section 208(b)(2)(F) requires that any plan prepared through the continuing planning process carried on by a designated Areawide Waste Treatment Management (AWTM) organization include

> a process to (i) identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution, including runoff from manure disposal areas, and land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources.

AWTM planning is designed primarily to facilitate achievement of water quality objectives in metropolitan areas through coordinated development of treatment systems,[123] so the impact of this planning requirement seems unlikely to reach too many agricultural operations. This dislocation is recognized by EPA, and regulations implementing section 208 provide that the state agency may act as the AWTM organization for identifying and controlling nonpoint sources.[124] Where this situation occurs, the states are supposed to conduct their section 208 planning responsibilities as a part of the continuing planning process required by section 303(e)(3)(B).

The section 303(e) continuing planning process is intended to serve as the central management tool of the states in carrying out their responsibilities under the 1972 Act. The theory is that the section 303(e) plans will provide state programs with information and strategic guidance which will in turn give needed direction to resource expenditures by establishing priorities and schedules of action.[125] Section 303 requires the formulation of both an overall program plan and specific basin plans. According to EPA's

120. 33 U.S.C.A. § 1314(e)(1) (Supp. 1974).
121. 33 U.S.C.A. § 1314(e)(1)(A) (Supp. 1974).
122. *See* METHODS, *supra* note 47; EPA, METHODS AND PRACTICES FOR CONTROLLING WATER POLLUTION FROM AGRICULTURAL NONPOINT SOURCES (1973); EPA, PROCESSES, PROCEDURES, AND METHODS TO CONTROL POLLUTION RESULTING FROM SILVICULTURAL ACTIVITIES (1973).
123. EPA, CLEAN WATER: REPORT TO CONGRESS-1973, at 9 (1973).
124. 40 C.F.R. § 126.20 (1973).
125. EPA, CLEAN WATER: REPORT TO CONGRESS-1973, at 7-8 (1973).

timetable, the states should now be developing programs for the accurate characterization of their nonpoint source pollution problems. By fiscal year 1976, the states should have identified waters where nonpoint sources will hamper attainment of water quality, identified the range of institutional management actions available to control nonpoint sources, and designed a program utilizing these actions.[126]

EPA's strategy for using the section 303(e) planning process to identify nonpoint sources and develop state level programs for their control dovetails with the requirements of section 305(b)(1)(E). This section requires the states, beginning January 1, 1975, to submit to EPA an annual report which includes "a description of the nature and extent of nonpoint sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs." Combining the section 303(e) and section 305(b) requirements, EPA projects that by 1976 each state should have generated a quantitative analysis of various nonpoint sources along with their relative contributions, geographical distribution and areas of major effect. In addition, each state should by 1976 also have developed a program for prevention, control and enforcement against nonpoint sources.[127]

If this approach appears considerably less structured and urgent than the point source control program, the appearance is at least consistent with announced policy. EPA's official statement of policy regarding nonpoint sources reads as follows:

> Non-point source (NPS) activities will not be oriented at first towards aggressive control and enforcement. Knowledge on the formation, extent, and effects of NPS pollution is limited. More important, the pervasive dispersed nature of NPS pollution does not lend itself to the conventional application of control technology such as waste water treatment plants. Therefore, this strategy aims at the eventual control of NPS pollution through local combinations of treatment, preventive management techniques (*appropriate applications of contour farming, construction site terracing, and clearcutting in forests, etc.*), and, as a framework, legislative initiatives to promote proper land use and NPS prevention.[128]

Thus, under the federal timetable, it will be several years before any meaningful control efforts will be directed toward nonpoint agricultural sources.[129] In the meantime, any control activi-

---

126. *See* EPA, WATER STRATEGY PAPER 22 (1973).
127. *See id.* at 23.
128. *Id.* at 21.
129. EPA's separate responsibilities under the new Federal Environmental Pesticide Control Act (FEPCA) constitute the only major federal regulatory activity that impacts directly or indirectly on agricultural land runoff constituents. P.L. No. 92-516, 86 Stat. 973 (1972). In theory, if EPA

ties aimed at nonpoint agricultural sources must be based on existing state programs. State programs to control nonpoint agricultural pollution have been surveyed by the author on several prior occasions[130] and it is beyond the scope of this article to repeat that effort here. Suffice it to say that, for all practical purposes, there are no effective state programs for controlling the main constituents of nonpoint agricultural pollution, such as animal wastes running off open pastures and crop residues, chemical fertilizers, pesticides, and silt washing from cropland.

The reason these agricultural pollution sources are not currently subject to effective state control measures is that the only practical way to reduce them is to prevent soil erosion. Nearly all of these pollutants reach waterways through uncontrolled runoff from land actively dedicated to agricultural production. Application of conventional soil conservation practices to land subject to excessive erosion will effectively eliminate these pollution sources. Decades of government encouragement of voluntary soil conservation practices has not solved the problem, yet to date, no state has dared impose mandatory soil conservation requirements on owners of agricultural land.[131] Until some type of compulsory soil erosion controls are instituted, little hope can be offered for

---

determined that all of the pesticide chemicals used in agricultural production posed an unacceptable risk to man and the environment, it could completely ban their use. Such an action has already been taken in respect to DDT products, *see* Environmental Defense Fund v. EPA, 489 F.2d 1247 (D.C. Cir. 1973). Similar action has been initiated in respect to the herbicide 2,4,5-T. 38 Fed. Reg. 17214 (1973). However, the major thrust of FEPCA is directed at the proper labeling and application of pesticides to prevent direct harm resulting from the use of these chemicals. *See* COUNCIL OF ENVIRONMENTAL QUALITY, 4TH ANNUAL REPORT 183-85 (1973). State regulation of pesticides is largely modeled on the federal law. *See* Deck, *Regulated Use of Chemicals in Agricultural Production,* 28 FOOD DRUG COSM. L.J. 628 (1973).

For this reason, it seems unlikely that action under these programs will significantly decrease the amount of pesticide which is applied to agricultural land and which is carried to water through land runoff. In fact, the prohibition of the strongest pesticides may lead to increased application of less effective formulas. EPA is under some pressure to relax its ban on DDT in the interests of increasing agricultural production in the face of a world food and fibre shortage. *See* Permit the Use of DDT, *Hearings Before the Subcomm. on Forests, of the House Comm. on Agriculture,* 93d Cong., 1st Sess. (1973).

130. *See* Hines & Schantz, *supra* note 94, at 362; Hines, *Agriculture: The Unseen Foe in the War on Pollution,* 55 CORNELL L. REV. 740 (1970); HINES, PUBLIC REGULATION OF WATER QUALITY IN THE UNITED STATES 384 (1971).

131. Some states have taken halting first steps. Iowa has enacted a statewide erosion control law which establishes soil loss limits. IOWA CODE ANN. § 467A.44 (1971). However, the enforcement provisions of the law do not become effective unless the land owner guilty of inadequate soil protection practices has available 75% government assistance in carrying out the necessary erosion control measures. IOWA CODE ANN. § 467A.48 (1971). This statute is discussed in Hines & Schantz, *supra* note 94, at 368-72. Illinois proposed state-wide regulations controlling the application of natural and chemical fertilizers on land adjacent to water bodies. Illinois Poll. Cont. B'd, Proposed Standards for Plan Nutrients, Newsletter #23, at 5, June 3, 1971. Resistance to the adoption of the regulations from the farm community resulted in abandonment of the proposal. Des Moines Register, April 9, 1972, at 2F, col. 1.

significant reduction in these pollutants.

CONCLUSION AND PROGNOSTICATION

Control of agricultural pollution is subject to the same bureaucratic principles that affect decision making at every level of life. Without necessary regard to relative seriousness, tangible problems, which respond well to conventional management techniques, are singled out for immediate action, while more elusive problems, which involve the risk of failure usually associated with uncertainty, are consigned to the purgatory of planning. Often, the solution to the latter type of problem is self-evident; but recognizing it involves thinking the unthinkable, a dangerous practice for any bureaucrat.

Thus, feedlot wastes, which are perhaps most visible in the public eye but account for only a small fraction of agricultural pollutants reaching water, receive immediate and intensive regulatory attention, while pollution caused by land runoffs, which is commonly recognized as the central problem, is deferred for study. Control of feedlot pollution involves requirement of the application of well known pollution control technology which can be counted upon to yield predicted results; and the requirement can be imposed in a milieu of political acceptability. On the other hand, control of pollution resulting from land runoff is an unexplored territory for pollution control agencies. Standard waste treatment methods are largely irrelevant. Yet, the longterm solution to the problem is apparent and the needed technology well demonstrated. The difficulty is that the idea of requiring landowners to install and maintain modern erosion control measures has always contravened widely held notions regarding the inviolability of private property—it is an unthinkable solution.

This analysis would support the prediction that feedlot wastes will be regulated with increasing vigor and that smaller and smaller units will be subjected to the NPDES permit requirements. Nonpoint agricultural runoff, on the other hand, will continue to be largely ignored while state and federal legislators debate the propriety of instituting compulsory soil conservation practices. Two possible alternatives could vary this senario. First, it could be decided that the control of polluting agricultural land runoff is sufficiently important to the national environment that a massive public investment is justified to solve the problem (vis the construction grant program for municipal waste treatment works, which provides seventy-five percent federal and twenty-five percent state support). Secondly, the current national concern for improving land use management[132] may eventually alter basic at-

132. *See* BOSSELMAN & CALLIES, THE QUIET REVOLUTION IN LAND USE CONTROL (1971); BOSSELMAN, CALLIES & BANTA, THE TAKING ISSUE (1973).

titudes toward the sanctity of private land and create a political environment favorable to requiring needed soil conservation measures.

In the absence of these developments, such recent events as the Administrator's attempt to terminate the Rural Environmental Assistance Program,[133] which, since 1936, has provided cost-sharing grants to encourage voluntary soil conservation practices, and the removal of acreage limitations for feed grains, which will bring back into production millions of acres of marginal land highly susceptible to erosion, presage a significant worsening in the pollution impact of agricultural nonpoint sources while the problem is being studied and planned.

133. *See* Guadamuz v. Ash, 368 F. Supp. 1233 (D.D.C. 1973).