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Clifford E. Blackwell, III

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HOW NOW BROWN COW:
REGULATION OF FEEDLOT POLLUTION
IN WISCONSIN

By Clifford E. Blackwell III*

I. INTRODUCTION

Over the last decade, the American public has become increasingly concerned with the problems of environmental pollution. Attention has been focused primarily on the areas of industrial and municipal waste pollution. However, in rural regions, pollution from agricultural sources is also a crucial concern.

Agricultural pollutants affect all phases of the ecosystem. Wind erosion of topsoil and careless use of pesticides add significantly to air pollution, as do odors from fertilized fields and commercial feeding operations. Water quality is impaired by soil erosion in four ways: (1) it causes silting and muddying of water supplies; (2) it adds harmful pesticides that can create poisonous mixtures in water sources; (3) it causes overfertilization of bodies of water through the addition of fertilizers and animal manure; and (4) with the addition of fertilizers and/or waste products to bodies of water, serious health hazards arise from the multiplication of bacteria.

This paper will deal specifically with water pollution caused by runoff from concentrated animal feeding operations and with the legal steps which are — or are not — being taken to abate this source of pollution.

"Feedlot" is a term with a large number of different meanings. In this article, "feedlot(s)" shall mean concentrated animal feeding operations for the raising, feeding, and holding of beef cattle, dairy cattle, hogs, sheep, and poultry. The physical characteristics of feedlots vary considerably. For purposes of this article, all but open pasture feedlot management systems shall be included in the term "feedlot." This exception is required because of the general understanding that such operations are considered to be non-point sources of pollution, and therefore not subject to federal control
under the Federal Water Pollution Control Act Amendments of 1972.1

Examples of feedlots in the beef cattle industry are operations for the raising of cattle for sale in an area in which feed must be supplied to the cattle; in other words, where animals exist in a high enough concentration to make grazing on natural or cultivated ground cover either impracticable or impossible. The cattle may be confined in a large unpaved area from which the manure should be disposed of after collection on a regular basis. Alternatively, the cattle may be kept in an area that has been paved and is either roofed or open. It must be understood that an agricultural operation which encompasses both crop and animal production will be considered a feedlot, at least to the extent of the animal production area. Some common synonyms for "feedlot" are "concentrated animal feeding operation," "animal pen," "animal yard," "feed yard," "feed pen," and, in certain contexts, "farm."

The pollution problem from feedlots arises from the inadequate disposal of animal wastes from the areas in which the animals are confined. In times of heavy rain, water may run through a confinement area and sweep manure and other animal wastes into nearby rivers and lakes. This runoff is high in nitrogen, phosphorus, magnesium, potassium and sodium. Such chemicals and their compounds accelerate the eutrophication process in rivers and lakes. Eutrophication, the natural aging process of bodies of water, is accomplished by the filling in of a body of water by sediments. The sedimentation comes from the death of organic matter such as algae blooms caused by excessive nutrification of lakes and the settling of silt swept from surrounding ground. As the algae decompose, they rob the water of oxygen needed to support fish and other animal life. Eventually the body of water will become a swamp, and finally solid land, completing the life cycle of the lake.

Another problem caused by runoff from animal feedlots is related to the health of those using water contaminated by such runoff. Feedlot runoff may contain, in quantities large enough to affect human and other animal life, bacteria such as fecal coliforms, fecal streptococci, and Salmonella.2 Typhoid, dysentery, and infectious hepatitis are diseases whose transmittal to humans may in some cases be attributed to bacteria carried by runoff from feedlot sources.2 Runoff from feedlots has resulted in the temporary closing of at least one federal recreation area because of the detection of excessive bacteria counts which would be dangerous to human health.4 The contamination of wells by nitrates from feedlots has
been documented in Illinois. A study by Dr. Abraham Gelperin of infant deaths draws a correlation between nitrate contamination of drinking water and death rates for female infants.\(^5\)

Pollution from feedlot runoff has resulted in a number of serious fishkills. One occurred in Fulton County, Indiana in late 1971 or early 1972 caused by discharge of runoff from Tinkey Farms, Inc.,\(^6\) and another at Nine Mile Creek near Minatare, Nebraska on January 16, 1974 from a discharge of contaminated runoff by American Beef Packers, Inc. of Omaha.\(^7\)

The extent of health and potential pollution problems can be seen most clearly when one considers that the total yearly output of animal manure in the United States, if dried, would amount to approximately two billion tons. This is equivalent to the amount of coal mined annually in the United States, or to the amount of oil pumped in the continental United States during one year.\(^8\) On a smaller scale, the waste output for various animals can be equated to that of humans as follows: 1 cow equals 10 people, 1 hog equals 2 people, and 7 chickens equal 1 person.\(^9\)

In most cases, the problems caused by runoff from feedlot sources can be prevented or at least diminished by institution of better management practices. Many farmers are unaware of the pollution potential of their feedlots. A good nationwide education program on the pollution potential and remedies within the economic reach of farmers could go far towards the alleviation of this source of water pollution. The Environmental Protection Agency has recognized the need for gathering information concerning sound management practices for the feedlot industry. A publication of its Region X office entitled CATTLE FEEDLOTS AND THE ENVIRONMENT discusses the need for and success of careful site selection for feedlot operations in order to protect the environment. The pamphlet stresses the need to consider factors such as geography, soil types, climate and proximity to water for environmentally safe site selection. If incorporated into the process of deciding where to locate a feedlot, these considerations could inexpensively reduce the pollution potential of new feedlots.\(^10\)

For existing feedlots, the safest and most practical method for disposal of manure is to recycle it to adjacent fields and open land. If recycling is not done in a programmed fashion, however, it may result in severe water pollution caused by runoff from the spreading area after heavy rains.\(^11\) There is no inherent need for such damage to be sustained, because technology and conventional learning have developed techniques which, if applied, permit spreading of manure
without adverse environmental effects. Certain common sense steps should be followed in the return of manure to open land. One should not spread manure on land with steep slopes. Also to be avoided is spreading manure on frozen land in a manner that would allow rainfall prior to or during the spring thaw to wash the manure into watercourses. In its publication entitled METHODS AND PRACTICES FOR CONTROLLING WATER POLLUTION FROM AGRICULTURAL NONPOINT SOURCES, the EPA outlines various environmentally safe practices for the spreading of manure. The suggested methods range from inexpensive changes in plowing and tilling practices, i.e. plowing perpendicularly to the line of gravity rather than parallel or diagonally to it, to quite expensive terracing of farm lands and the institution of extensive drainage systems. When manure is applied to the land in connection with practices like these, there should be little threat of water quality degradation except in the most extreme climatic conditions.\(^1\)

For feedlots that cannot make efficient use of the above described management practices, various government agencies have been doing research on alternative methods for the recycling of animal wastes. The Department of Agriculture has been studying the feasibility of recycling animal wastes back through the food cycle of the animals. This is accomplished by drying the manure and removing the harmful components of the waste from it. The remainder is then added to existing feed supplies for a protein-rich supplement.\(^2\) The Department of the Interior’s Bureau of Mines has been working on converting animal wastes into various energy products, primarily oil and gas.\(^3\) The Department of the Army has recently announced that it is perfecting a method of changing organic wastes, including animal wastes, into ethyl alcohol. This process is expected to be commercially feasible within the next five years.\(^4\) Though these and other projects are still in the research stages, they show great potential for the efficient recycling of animal wastes.

In states such as Wisconsin, the conflict between maintenance of water quality and efficient utilization of prime agricultural land is particularly acute. Excluding the Great Lakes, Wisconsin contains approximately 1,137,000 acres of surface waters, which constitute 3.1 percent of the total surface of the state. In addition, the state has more than 34,000 miles of streams.\(^5\) The recreation industry in Wisconsin, which is heavily dependent upon a high standard of water quality, is expected to bring approximately 2.2 billion dollars of revenue into the state in 1974. Farming, on the other hand, which occupies 18,109,000 acres of the state, is expected to net about 2
billion dollars. Thus, in order to protect the increasingly lucrative recreational industry, pollution performance standards for the agricultural sector must be established and enforced. Such standards have been set up on the federal, state and local levels.

II. Federal Controls

A. The Rivers and Harbors Act of 1899

Prior to 1972, the only federal legislation to deal with discharges of agricultural waste was the Rivers and Harbors Act of 1899. Section 13 of the Act, commonly known as the Refuse Act of 1899, states:

It shall not be lawful to throw, discharge, or deposit, or cause, suffer, or procure to be thrown, discharged, or deposited either from or out of any ship, barge, or other floating craft of any kind, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any kind or description whatever other than that flowing from the streets and sewers and passing therefrom in a liquid state, into any navigable water of the United States, or into any tributary of any navigable water which the same shall float or be washed into such navigable water. .. .

Congress envisioned the necessity for making certain exceptions to this rule for the purposes of alleviating burdens on interstate commerce and providing for the rational development of the water resources of the United States. Therefore, it empowered the Secretary of the Army, upon advice of the Chief of Engineers, to

... permit the deposit of any material above mentioned in navigable waters, within limits to be defined and under conditions to be prescribed by him [Chief of Engineers], provided application is made to him prior to depositing such material; and whenever any permit is so granted the conditions thereof shall be strictly complied with, and any violation thereof shall be unlawful.

The mechanics of the permit system were not set up by the Army Corps of Engineers until seventy-two years later, on April 9, 1971, pursuant to Executive Order No. 11574 of December 23, 1970. There are several exceptions to the permit requirement under the 1971 regulations, but discharges from agricultural sources are not exempted. Two suits concerning agricultural pollution sources have been instituted under the Refuse Act. One was settled by a consent decree; the other resulted in a $1000 fine.

The Federal Water Pollution Control Act Amendments of 1972
have now preempted the bringing of such actions under the Refuse Act. However, the EPA feels that certain types of actions, such as those dealing with the inefficient spreading of manure on land in a manner which may result in the washing of those deposits into navigable waters, may still be brought under the Refuse Act. 24

B. The Federal Water Pollution Control Act Amendments of 1972

In October 1972, Congress passed the Federal Water Pollution Control Act Amendments, which essentially took over the permit program suggested in the Refuse Act of 1899. 25 Section 402 of the 1972 Act establishes the National Pollutant Discharge Elimination System (NPDES). Under this section, the Administrator of the Environmental Protection Agency may allow the discharge of pollutants despite the provision of Section 301(a), which states that “. . . the discharge of any pollutant from any point source by any person shall be unlawful.” 26 Such discharges may be allowed if they meet the standards set forth in Sections 301, 302, 306, 307, 308, and 403 of the Act. Section 402 establishes the permit system for the control of discharges of pollutants from point sources. The term “discharge of a pollutant” is defined in Section 502(12) as “any addition of any pollutant to navigable waters from any point source.” “Pollutant,” as defined in Section 502(6), includes, among other substances, “agricultural waste discharged into water.” Section 502(14) defines the term “point source” to include, among other sources of discharges, “concentrated animal feeding operation[s].” 27

The entire control apparatus of the FWPCA of 1972 is intertwined with the concept of the point source. In general terms, point sources are objects such as pipes, ditches, and other readily identifiable outlets for effluents. A non-point source, on the other hand, is an open area from which a single source of discharge would be impossible to identify. Examples of non-point sources are farm land used for the cultivation of crops, forest lands, and construction areas. 27

One may speculate as to why concentrated animal feeding operations were included as point sources when their physical characteristics seem to be more like those of non-point sources. However, such speculation is fruitless since Congress specifically enumerated feedlots as point sources. 28 The distinction between point and non-point sources is crucial for control under the FWPCA. Non-point sources do not fall within the ambit of the permit system, the principal enforcement mechanism of the Act. In fact, non-point sources are only discussed in the context of identifying their existence and loca-
tion and the research needed to control pollution from them.\textsuperscript{29} Point sources, on the other hand, are subject to all controls and limitations of the FWPCA.

On December 22, 1972 and May 22, 1973, the EPA promulgated regulations for the issuance of permits under Section 402 by the states and the EPA, respectively. Both sets of regulations state that all "discharges of pollutants . . . from all point sources are unlawful . . . unless the discharger has a permit."\textsuperscript{30} On July 5, 1973 the EPA promulgated regulations amending those of December 22 and May 22 by excluding large segments of the agricultural point source category from the requirement of permit application. The July 5th regulations require permit applications only for those feedlots which, for any thirty day period within the prior twelve months, have exceeded the following population quotas:

\begin{tabular}{|l|c|}
\hline
\textbf{Type of animals} & \textbf{Number} \\
\hline
Slaughter & feeder cattle & 1,000 \\
Mature dairy cattle (milkers or dry) & 700 \\
Swine over 55 pounds & 2,500 \\
Sheep & 10,000 \\
Turkeys & 55,000 \\
Laying hens and broilers in confinement facilities with continuous overflow watering & 100,000 \\
Laying hens and broilers in confinement facilities with liquid manure handling systems & 30,000 \\
Ducks & 5,000 \\
\hline
\end{tabular}

Permits are also required of point sources otherwise excluded from the requirement if they are considered by the EPA or the appropriate state or interstate water pollution control agency to be "a significant contributor of pollution."\textsuperscript{31} In fact, Section 510 of the FWPCA allows the states to make their own determinations of pollution criteria in the event that state officials conclude that federal controls are insufficient to meet local pollution requirements.\textsuperscript{32}

In the preface to the July 5th regulations, the Administrator claims discretion to exempt certain categories of point sources from the necessity of acquiring a permit under Section 402. He infers this discretion from the language of the same section: "... the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding Section 301(a). . . ."\textsuperscript{33} (emphasis added). In the notice preceding the July 5th regulations, the Administrator indicates
his reasons for invoking his discretion: "The basis for the exclusions is that the pollution problems caused by the excluded categories of point sources are minor in relation to the administrative problems of processing vast numbers of agricultural discharge application forms."34

In an internal memorandum, EPA Associate General Counsel Robert V. Zener derives the basis of the Administrator's discretion from the reference to Section 402 in Section 301(a).

The reference to section 402 clearly means that where the Administrator stands ready to entertain an application from a point source, that point source must obtain a permit. But if the Administrator announces that he will not entertain applications from farms, it could hardly be argued that a farm discharge was not in compliance with section 402.35

The effect of Mr. Zener's argument is diminished by the last sentence of his memorandum, which reads:

However, an administrative exclusion of farm point sources (other than feedlots) should be sustainable if it can be shown that the pollution problem is minor in relation to the administrative problems involved, or that the permit program would be an ineffective mechanism for controlling a particular category of sources.36 (emphasis added)

This statement, which clearly demonstrates Mr. Zener's feeling that feedlots could not be excluded from obtaining a permit, is evidently based on the specific enumeration of "concentrated animal feeding operations," i.e. feedlots, as point sources in Section 502(14) of the FWPCA.

The Administrator's actions in this regard have come under strong criticism from both the Natural Resources Defense Council and the House of Representatives Subcommittee on Conservation and Natural Resources of the Committee on Government Operations. The NRDC filed suit against the EPA in Federal District Court in Washington, D.C. on October 19, 1973. In paragraph 21 of the NRDC brief, it is contended that the exclusion of certain categories of point sources, including feedlots, from the permit program is illegal because neither the Act nor Congressional intent gives the Administrator "... discretion to exclude some point sources from the NPDES altogether which EPA deems relatively less important or administratively difficult to deal with." Alternatively, if the Administrator does have the discretion to exclude some point sources from the permit program, his actions are "arbitrary, capricious, an abuse of discretion and without rational basis ..." The alleged abuse of discretion arises from the Administrator's failure to
adequately weigh the Congressional intent that the EPA's control extend to "... at least that segment of the industry causing the more significant pollution problem ..." The Administrator has also neglected to take into account the Congressional intent that authority to issue permits under Section 402 be transferred to the states, whose administrative structures may be more efficiently or appropriately organized to deal with large numbers of permit applications. Such transfers were designed to relieve the administrative burdens to which the EPA attributes the necessity of these point source exclusions.37

The House Subcommittee on Natural Resources has also expressed dismay at the EPA exclusions for feedlot point sources. On June 25, 1973, Congressmen Henry S. Reuss (D-Wis.) and Guy Vander Jagt (R-Mich.) sent a letter to Robert W. Fri, Acting Administrator of the EPA, challenging, among other things, the Administrator's claim of discretion in this matter. With regard to the Administrator's interpretation of Section 402(a)(1), the Congressmen "... find this contention quite startling, novel, and strained." They assert that, if carried to its logical extreme, the Administrator's interpretation would render the purpose and intent of Section 301(a) inoperative. Recognizing that Section 301(a) makes illegal the discharge of any pollutant from a point source, Congress created NPDES so as to allow discharges of pollutants if they meet standards specified in Sections 301, 302, 306, 307, 308, 318, and 404 of the Act. The Congressmen conclude that the word "may" in Section 402(a)(1)

... simply authorizes EPA to issue permits to those who comply with the specified requirements, and to refuse to issue permits to those who do not or cannot comply with those requirements. It does not in any way give EPA authority to determine whether all or some point sources must apply for a permit ... nor does it authorize EPA to ... legitimize an unlawful discharge.38

The Congressmen recognize that in some instances the Administrator is given discretion; however, these grants apply to certain specified provisions, which are not relevant here. The Congressmen also concede that the Administrator has some discretion to define the limits of a "concentrated animal feeding operation," a term which is not specifically defined by the FWPCA.

The Congressmen make reference to a discussion between Senators Robert Dole and Edmund Muskie as to what Senator Muskie, the sponsor of the FWPCA in the Senate, considered to be general
criteria for including an animal feeding operation within the permit program. In response to Senator Dole's request for clarification of the terms "point source" and "nonpoint source," especially as related to agriculture, Senator Muskie stated that

The present policy with respect to the identification of agricultural point sources is generally as follows:

First. If a man-made drainage ditch, flushing system or other such device is involved and if measurable waste results and is discharged into water, it is considered a 'point source.'

Second. Natural runoff from confined livestock and poultry operations are not considered a 'point source' unless the following concentrations of animals are exceeded: 1,000 beef cattle; 700 dairy cows; 290,000 broiler chickens; 180,000 laying hens; 55,000 turkeys; 4,500 slaughter hogs, 35,000 feeder pigs; 12,000 sheep or lambs; 145,000 ducks.

Third. Any feedlot operation which results in the direct discharge of wastes into a stream which traverses the feedlot are [sic] considered point sources without regard to the number of animals involved.\footnote{In his first and third criteria, Senator Muskie made no reference to numbers of animals as being requisite for a feedlot's inclusion as a "point source." In his second criterion, Senator Muskie differentiated between classes within a point source by setting a minimum number of animals for inclusion of a given feedlot in the permit system. The figures which he cited were not ones that he or his staff had arrived at independently, but those reflecting EPA policy at that time. Congressmen Reuss and Vander Jagt insist that "he did not, of course, specify or intend that EPA should be bound by, or adhere to, these minimum numbers."} The Congressmen conclude their letter by asserting, once again, that the Administrator's decision to exclude certain categories of point sources is unlawful because of an erroneous interpretation of Section 402(a)(1) of the Act. They also feel that the Administrator has stepped beyond the bounds of his authority in defining "concentrated animal feeding operations" in reference to the alleged administrative burden on EPA of processing applications from all feedlots, and not in terms of the pollution problem caused by the excluded categories.\footnote{There is clear evidence that the EPA has overlooked the serious water pollution contributed by the numerous small feedlots excluded from the EPA permit program. On January 10, 1973, Secretary of Agriculture Earl Butz wrote the Administrator of the EPA, indicating his views as to the minimum number of animals for a feedlot to be considered a "concentrated animal feeding operation"}
for purposes of the permit program. Secretary Butz's suggestions are considerably lower than those presently required by the EPA. Specifically, they are:

<table>
<thead>
<tr>
<th>Type of animals</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slaughter steers or heifers</td>
<td>300</td>
</tr>
<tr>
<td>Dairy cows</td>
<td>200</td>
</tr>
<tr>
<td>Broilers</td>
<td>35,000</td>
</tr>
<tr>
<td>Laying hens</td>
<td>32,000</td>
</tr>
<tr>
<td>Turkeys</td>
<td>10,000</td>
</tr>
<tr>
<td>Butcher hogs</td>
<td>1,200</td>
</tr>
<tr>
<td>Feeder pigs</td>
<td>10,000</td>
</tr>
</tbody>
</table>
| Sheep                        | 2,300*

The EPA has given no indication as to why it has disregarded Secretary Butz's recommendations. The House Conservation and Natural Resources Subcommittee staff memorandum of November 19, 1973 gives the impression that the Subcommittee believes that Butz's figures represent a much more realistic appraisal of the pollution problem than do the figures of the EPA.

In support of its argument, the subcommittee memorandum cites the policies of various states with regard to their numerical criteria for defining "concentrated animal feeding operations." For instance, under North Dakota regulations, a feedlot having as few as 300 feeder cattle or 200 animal units will nevertheless be required to obtain a state permit. Nebraska, like California and Indiana, does not have a fixed quota; its water quality agency states, "small operations can be just as significant contributors of water pollution as larger operations; therefore, capacity numbers are not used." Because the state agencies deal more closely with the problem than does the EPA, their policies are apt to reflect a better understanding of the statutory limitations needed for effective water pollution abatement and prevention.

Both the EPA and the Department of Agriculture have commissioned reports on the environmental and economic effects of runoff from feedlots. In a draft copy of Development Document Guidelines and Standards of Performance, Feedlot Industry, prepared in June, 1973 by Hamilton Standard (a division of the United Aircraft Corporation), no distinction is made between large and small feedlots in terms of the need to eliminate pollution from such sources. The report recommends

... that no discharge of wastes to navigable waters be allowed after 1 July 1977 for existing feedlots and immediately for all new feedlots for
the animal types: beef cattle, dairy cattle, swine, chickens, turkeys, sheep, and horses. This elimination of discharge would be achieved by the recycling of wastes to land for efficient utilization as moisture and nutrients by growing crops.44

The Department of Agriculture’s Economic Research Service (ERS); in a series of reports on the economic impact of controlling surface water pollution from various feedlot sources, includes statistical information on the scope of the pollution problem. In the case of beef-feeding operations, the ERS states that 49,000 such operations in the eighteen major beef-feeding states have point source surface water pollution control problems. Only 10,000 of these operations have concentrations of animals in excess of 100 head.45 And a mere 610 of these will be required to apply for permits under the EPA guidelines.46

In the case of dairy farms, ERS indicates that forty percent of such operations have surface runoff pollution problems. ERS further states that with regard to dairy farms there is no significant correlation between herd size and the percentage of farms with pollution problems.47 The EPA regulations now in effect require permits of only those dairy farms with more than 700 head of cattle. EPA thereby ignores the fact that fifty-five percent of the dairy cattle in the eight leading dairy states are found on farms with concentrations of twenty to forty-nine head. A mere five percent of the dairy cattle in these top eight states are located on farms with concentrations of 100 or more cattle.48 Thus, while figures indicating the percentage of dairy farms of over 700 head are not available, it is obvious that the regulations cover only a miniscule number of farms and cattle.

In its report on hog-feeding operations, ERS reports that in the fifteen leading hog producing states, approximately 112,000 farms, or 22 percent of the total in those states, have significant pollution problems. Of these, over 95,000 farms have 500 or less hogs.49 The EPA regulations require permits of farms with concentrations in excess of 2,500 hogs. In the top ten states, farms with over 1,000 hogs represented only 13.06 percent of the marketed hogs. In contrast, 68.54 percent of all marketed hogs in the ten leading states came, in 1969, from farms with less than 500 hogs.50 The percentage of hog-feeding operations covered by the regulations is thus unlikely to be much larger than the percentage of regulated dairy farms.

Several states have indicated that the major problem with feedlot pollution comes from categories that have been excluded from the EPA regulations. The Iowa Department of Environmental Quality
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states that "livestock feedlots represent the largest source of uncontrolled point source waste discharges into Iowa streams" and that the "EPA guideline will not cover most of the feedlot operations in the State of Iowa which pollute or which have the potential for polluting Iowa's waters. . . ." Indiana feels that the EPA guidelines are drawn so narrowly that effective management of feedlot pollution is precluded:

. . . it has been the experience of this office that the pollution problem is by no means confined to a few of the largest operations in the State. On the contrary, these operations many times are better designed and employ a higher degree of management, and consequently, have less pollution potential than the smaller operations.

An EPA report of August, 1973 entitled ECONOMIC ANALYSIS OF PROPOSED EFFLUENT GUIDELINES, FEEDLOTS INDUSTRY, states that up to four-fifths of cattle feedlots in the United States with concentrations of fewer than 500 head of cattle have surface water pollution problems. However, only twenty to thirty percent of feedlots over 1000 head do not meet the proposed effluent guidelines. In other words, the EPA is requiring permits from a category, two-thirds of the members of which pose no pollution problem, while allowing a category with as low as twenty percent compliance to escape regulation.

The EPA guidelines fail in other important ways to take environmental factors into consideration. The guidelines make no attempt to control independent adjacent feedlots that may total over the 1000 animal unit minimum. This gap in EPA coverage poses significant pollution problems in areas with large numbers of medium sized feedlots. An entire river basin with "wall to wall" feedlots can escape EPA regulation completely, if each of the lots is below the critical size.

Second, EPA's guidelines do not make distinctions between feedlots as to their proximity to water sources. A feedlot with 500 head of cattle that is 200 feet from a river may very well pose a much more severe pollution problem than a feedlot with over 1000 head that is located a mile away but still has a minor discharge.

Third, the EPA regulations do not take into consideration such variables as soil type, amount of precipitation, and local geography. Yet in its April, 1972 report CATTLE FEEDLOTS AND THE ENVIRONMENT, Regional Office X of the EPA itself considered these to be crucial factors in sound animal feedlot pollution planning.

A fourth deficiency of the EPA regulations involves Section 308 of the Federal Water Pollution Control Act, which provides for a
system of monitoring and inspection to ascertain the extent of compliance, the quality of the discharge, and any further information which could be helpful in the abatement of water pollution. For administrative convenience, this system was apparently set to work in conjunction with the permit program. Thus, if EPA excludes large numbers of feedlots from the permit program, it will lose the benefits of a large information-gathering program.

In paragraph three of the July 5th regulations, the EPA indicated that despite the exclusion of smaller feedlots from the requirement of obtaining a permit, they would still be required to meet all other standards and guidelines set forth in the FWPCA and in regulations promulgated thereunder. On September 7, 1973, the EPA published proposed effluent guidelines and new source performance standards for the feedlot point source category. These guidelines were to apply to all point sources in the feedlot industry, whether or not they were required to file for a permit under the July 5th regulations. This proposal created widespread alarm in the feedlot industry. The EPA apparently received so much criticism concerning this decision that on October 1st and 15th, EPA’s Assistant Administrator, Robert L. Sansom, notified all EPA regional offices of the agency’s intent to require only those feedlots which must file for permits to meet the proposed effluent guidelines. This intent was carried out when the final effluent guidelines and new source performance standards were promulgated on February 14, 1974. When viewed in connection with Section 301(a) of the FWPCA, EPA’s exemption of small feedlots from the effluent guidelines is inadvisable at best. The legality of the EPA’s exemptions is questionable because of the apparent contradiction between Sections 301(e) and 304(b). Section 301(e) calls for the application of effluent limitations to all point sources, regardless of class or category, while Section 304(b) allows the Administrator to distinguish between such classes or categories in the development of effluent limitations.

Regardless of the extent of the pollution problem caused by feedlots excluded from the EPA guidelines, the EPA has not shown that there will be an excessive administrative burden placed upon it by setting lower minimum figures for animal concentrations. The Bureau of the Census animal statistics indicate that the EPA would not necessarily be swamped with applications should the limits be lowered. The following tables give an idea of the increases in numbers of applications which may be expected should the minimum numbers be lowered:

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FEEDLOT POLLUTION

<table>
<thead>
<tr>
<th>Minimum Number of Animals</th>
<th>Estimated Number of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy cattle</td>
<td></td>
</tr>
<tr>
<td>700</td>
<td>308</td>
</tr>
<tr>
<td>630</td>
<td>367</td>
</tr>
<tr>
<td>560</td>
<td>486</td>
</tr>
<tr>
<td>490</td>
<td>645</td>
</tr>
<tr>
<td>420</td>
<td>839</td>
</tr>
<tr>
<td>350</td>
<td>1120</td>
</tr>
<tr>
<td>Ducks</td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td>150</td>
</tr>
<tr>
<td>4500</td>
<td>180</td>
</tr>
<tr>
<td>4000</td>
<td>200</td>
</tr>
<tr>
<td>3500</td>
<td>210</td>
</tr>
<tr>
<td>3000</td>
<td>220</td>
</tr>
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<td>2500</td>
<td>230</td>
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</tbody>
</table>

The number of anticipated applications from the dairy cattle industry would quadruple if the present minimum number of 700 was changed to 350, but when one considers that the applications would be divided among the ten regional offices of the EPA and in some instances submitted to state water pollution control agencies, rather than to the EPA itself, the figures may be seen in more accurate perspective. In the FWPCA, Congress did provide the EPA with a method for relieving the administrative burden of accepting large numbers of applications. Section 402(b) looks to the states to assume responsibility for the permit program. Once a state has applied, “the Administrator shall approve each submitted program unless...” he determines that there exist administrative deficiencies in it which would abrogate any of the provisions of the FWPCA. Virtually all of the states with major feedlot problems have either submitted applications or have expressed their intention to do so.82 The granting of such permit authority would allow the states, which have proportionally larger staffs than the regional EPA offices, to administer and enforce the provisions of the FWPCA. In addition, the state staffs have a greater network of people “on the ground” to monitor pollution problems on the local level.

In promulgating the July 5th regulations concerning minimum concentration limits for animal feedlots, the EPA apparently did not take into consideration the provision of Section 402(b), whereby administrative responsibility for the permit program can be transferred to the states. Had the EPA recognized the potential value of the states’ administrative resources, it would presumably have es-
tablished criteria more in keeping with stricter pre-existent state criteria.

C. Other Federal Agency Action

The Department of Agriculture has compounded the problem of agricultural point source pollution by its support of chemical rather than organically made fertilizers. This is especially shortsighted in a time when, because of the energy crisis, there exists a shortage of chemical fertilizers. The Department could help alleviate the pollution problem by expanding its rural environmental assistance program, now known as the Rural Environmental Conservation Program, to include cost sharing programs to provide financial aid for the purchase of mechanical devices for the spreading of manure in environmentally sound ways. It has failed to undertake such expansion, however, and RECP relief is currently limited to sharing the cost of building manure storage facilities.

Even the Office of Management and Budget has compounded the feedlot pollution problem. Recently it reduced the funding for the Department of the Interior's Bureau of Mines by an amount exactly equaling the figure appropriated by Congress for a program to research the feasibility of converting animal manure to gas and oil. The initial report resulting from this research, completed before the current energy shortage, indicated that the gasification of manure could be accomplished in significant quantities at a slightly higher than competitive price. It is difficult to be certain, but in light of the price increases in gas and oil during the last eighteen months, one could conclude that the costs would now be considered both reasonable and competitive.

III. Wisconsin Regulations

As noted previously, most states with significant feedlot operations have applied or expressed their intention to apply for final permit authority under Section 402(b) of the FWPCA. Wisconsin, for one, has received final authority to administer the NPDES program through its state water pollution control agency, the Department of Natural Resources. Thus a brief examination of the State's handling of the problem is provided below.

While Wisconsin does not have a large problem with fed-beef feedlots, it does have problems or the potential for significant pollution from dairy and hog operations. The state of Wisconsin has long been considered a leader among states interested in environmental affairs. However, the state seems to have had little success in its
legislative and administrative attempts to deal with the problem of pollution from feedlot sources.

In 1965, Wisconsin passed amendments to Chapter 144 of the Wisconsin Statutes. Section 144.025 gives the state broad enforcement capabilities, and the amendments give the Department of Natural Resources (DNR) the power to issue general, special, and temporary emergency orders for the maintenance of water quality. In 1967, Wisconsin established interstate water quality standards pursuant to the 1965 Federal Water Quality Improvement Act. Wisconsin issued water quality standards for intrastate waters in 1968. Using the language of Section 144.025(2)(d)1, DNR has issued four special orders to feedlot operations ordering compliance with applicable water quality standards. The following table indicates the status of these orders:

<table>
<thead>
<tr>
<th>Entity</th>
<th>Date Issued</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budding Processing Co., Fall River</td>
<td>9-24-70</td>
<td>Order satisfied</td>
</tr>
<tr>
<td>Cold Comfort Farms, Blue Mounds</td>
<td>10-13-71</td>
<td>Closed</td>
</tr>
<tr>
<td>Hennesey Brothers Feedlot, Dodgeville</td>
<td>10-13-71</td>
<td>Under construction</td>
</tr>
<tr>
<td>Wisconsin Land &amp; Cattle, Mount Horeb</td>
<td>9-03-71</td>
<td>Closed*</td>
</tr>
</tbody>
</table>

In December, 1971, the Department of Natural Resources proposed rules for animal waste management. These were to give the Department guidelines for the issuance of orders under Section 144.025. The rules sought to set high standards for the disposal and waste management practices of the farming industry in Wisconsin. Public hearings were held on the proposed rules in early 1972, and public reaction was vigorous enough to require several changes in the proposed rules. The amended proposal was presented to the Natural Resources Board on December 8, 1972. While the amendments to the proposed rules were being formulated, the Federal Water Pollution Control Act Amendments of 1972 were passed. The Department of Natural Resources decided to discard its proposed guidelines in favor of seeking permit authority to administer the NPDES. On July 21, 1973, Chapter 74, Laws of Wisconsin, Statute 147 was published. This law authorized the state to seek permit authority from the EPA under the FWPCA of 1972. It also made most of the changes in Wisconsin law necessary to make it consistent with the requirements of the federal Act. In September, 1973, the legislature passed revisions in the state water quality standards
to bring the state into full compliance with federal requirements.\textsuperscript{72} On November 7, 1973 Wisconsin submitted its application to the regional EPA office seeking permit authority. On December 18, 1973 the required public hearing was held, and on February 4, 1974 Wisconsin was granted final permitting authority by the EPA.\textsuperscript{73}

The Wisconsin legislature is dominated by representatives of the agriculture industry. The effect of their control is seen in Statute 147.021, enacted on July 21, 1973:

All rules adopted by the department pursuant to this chapter as they relate to point source discharges, effluent limitations, water quality related limitations, municipal monitoring requirements, standards of performance and toxic and pretreatment effluent standards shall comply with and not exceed the requirements of the federal water pollution control act amendments of 1972, P.L. 92-500, and regulations adopted pursuant thereto.\textsuperscript{74}

This provision was enacted despite Section 510 of the FWPCA, which allows states to make rules or regulations which are more stringent than those decreed by the EPA.\textsuperscript{75}

Section 147.021 was probably passed in reaction to the much stricter rules for animal waste management contemplated by the State DNR, and in light of the lenient EPA regulations promulgated on July 5, 1973. The provision will severely handicap the DNR's attempts to deal with feedlot pollution in any meaningful way since it is estimated that of the approximately 106,000 farms in Wisconsin,\textsuperscript{76} only 100 farms will be required to seek permits under the numerical guidelines set by the EPA and endorsed by the Wisconsin legislature.\textsuperscript{77}

Of the 57,864 dairy farms in the state, 57,542 (99.5%) have animal concentrations of less than 100 head.\textsuperscript{78} This leaves 322 farms in the "100 or over" category, many of which still do not contain sufficient concentrations of cattle to qualify for permits under the EPA's 700-head criterion.

In spite of this limitation, the DNR, perhaps over-optimistically, hopes to make considerable use of the "significant contributor of pollution" designation.\textsuperscript{79} Taking action on the basis of this designation will probably be easier to talk about than to accomplish, however, because of the failure of the EPA to give any definition for the phrase or to suggest any guidelines for its application. The Wisconsin legislature also neglected to define the term, and the DNR has not yet proposed a definition under which it would seek to expand its permitting authority.

It can be predicted that the Wisconsin legislature's actions in
severely limiting the authority of the DNR to deal with feedlot pollution will have disastrous results for the quality of the state's lakes and rivers. Because of the neglect, first by the EPA and second by the state, of their respective responsibilities, the main burden of water quality protection now falls on local governmental units — a result certainly contrary to the spirit of modern water quality legislation.

IV. Conclusion

Many parts of the United States experience severe pollution problems due to uncontrolled runoff from feedlot and other agricultural sources. Congress recognized its responsibility and attempted, by enacting the 1972 Federal Water Pollution Control Act Amendments, to initiate federal action to clean up these sources of pollution. The EPA, which had been granted authority to administer the program, has attempted to abrogate the effectiveness of the Act.

This default on the part of the EPA may be explained in any one of three ways. The first is the official EPA statement that to include greater numbers of small feedlots would place an unacceptable burden upon the agency in terms of both budget allocation and available manpower. Secondly, an EPA regional counsel indicated that the agency's inactivity in the agricultural area is a result of conscious political decision to focus its efforts on more "visible" urban sources of water pollution. The motivation for such a concentration of activity is to demonstrate the effectiveness of the EPA's enforcement actions in order to maintain or increase federal appropriations to the agency.\(^6\) Finally, there is evidence to indicate that the EPA was highly sensitive to criticism from representatives of agribusiness. This capitulation to the feedlot industry is reflected in the EPA's October 1973 reversal of its original decision to apply effluent limitations and guidelines to feedlots not required to obtain permits. The reversal was made after the EPA had received extensive pressure from representatives of commercial interests during the preceding month.

The fundamental concern of the cattle industry has been that of economic dislocation, both in terms of increased cost to the consumer and elimination of large numbers of small farming units. However, studies by the Economic Research Service and by David Blitzer of the National Resources Defense Council conclude that though problems may be expected in the short-run, there will be little long-term decrease in the productive capacity of the feedlot industry. In fact, both ERS and Blitzer indicate that the application
of surface water pollution controls, by hastening the departure of
the very small feedlot, will result in the reorganization of the indus-
try into larger and therefore more efficient production units. This
efficiency would result from the economies of scale for capital found
in the feedlot industry.81

In order to bring larger numbers of feedlots under NPDES con-
trol, the EPA should reverse its decision to rely as heavily as it does
on the numerical criteria for feedlot designations. Failing this, all
point sources of agricultural runoff should at least be re-included
under the effluent guidelines promulgated on February 14, 1974.82
Re-inclusion of small feedlots within the effluent guidelines is im-
portant because the toxicity of wastes from small feedlots, though
in smaller amounts, is as damaging as that of larger feedlots.

The EPA has scrupulously avoided extension of its authority to
anything that could be even remotely considered a non-point source
of agricultural pollution. EPA's lack of action has been most notable
in its refusal to accept responsibility for control of manure spreading
operations, even where the manure has originated from a feedlot
required to obtain a permit. The EPA does grudgingly admit that
it has the capability to regulate this source of agricultural pollution
under the Refuse Act of 1899, but will not consider such regulation
as part of its responsibilities under the FWPCA of 1972.83 Since the
manure itself is a part of the discharge to be controlled, one has the
feeling that once again, the EPA has deliberately chosen to construe
the reaches of its authority under the Act with exceeding modesty.

The Department of Agriculture and other federal agencies doing
research in the field of animal waste pollution should be encouraged
to increase their efforts in this direction. More funds should be
allocated and spent for existing research in the areas of recycling
animal manure through the food cycle and conversion of animal
wastes into assorted energy products. The Department of Agricul-
ture should also increase funding for projects to encourage the use
of organic rather than chemical fertilizers and to develop more eco-
nomical technology for such use.

In Wisconsin, whose water resources are seriously threatened by
runoff pollution from dairy and hog farms, the legislature has effec-
tively stymied any meaningful abatement action. The shortsighted
and self-interested view taken by the state legislators may severely
damage an increasingly successful recreation industry, which de-
pends heavily upon the availability of clean and attractive rivers,
lakes, and water supplies. If the Department of Natural Resources
is to deal effectively with this serious pollution problem, the state
legislature will have to reconsider what can only be termed its unfortunate limitation on the DNR.

The threat posed to water quality by agricultural runoff pollution cannot be dealt with in the manner employed to date. The problem can only be solved through the cooperation of federal, state, and local governments which, unfettered by self-interested pressure groups or concerns over administrative burdens, have the resolve and energy to obtain a high standard of water quality.

\* Third year student at Harvard Law School.

1 See p. 774 infra for further discussion of non-point sources; See also U.S. Environmental Protection Agency, METHODS AND PRACTICES FOR CONTROLLING WATER POLLUTION FROM AGRICULTURAL NON-POINT SOURCES at 57-58 (1973) (hereinafter cited as METHODS.)


3 Id. at 830.

4 Id. at 71-2 (statement of Dr. Charles M. Loveless).

5 Id. at 215 (statement of Louise Rome).


10 Id.

11 METHODS at 53-4.

12 Id. at 53-7.


15 BOSTON EVENING GLOBE, Apr. 26, 1974, at 6, col. 4.

16 Wis. Dep’t of Business Development, WATER.


Id.


Memorandum from Lauren R. Oldak to Assoc. Gen. Counsel Water as attached to memorandum from Robert V. Zener to Anson M. Keller, Sept. 24, 1973 in Hearings at 683-84.


On February 19, 1974 a federal grand jury in Omaha, Nebraska returned the first indictment against a feedlot for an illegal discharge under Section 301(a) of the FWPCA. United States v. American Beef Packers, Inc. (D.C. Neb., 1974).


Id. at 669.


Id. at 17-18.

Id. at 18.

Id. at 22-23.


Staff of Conservation & Natural Resources Subcomm. of House Comm. on Gov't Operations, 93d Cong. 1st Sess., Memorandum on Control of Pollution from Animal Feedlots at 6 (1973) (hereinafter cited as Memorandum.)


AGRICULTURAL CENSUS, Table IV-5 (1969).


AGRICULTURAL CENSUS, Table III-6 (1969).

Letter from Joseph E. Ober to House Conservation & Natural Resources Subcomm., Nov. 9, 1973 in Hearings at 1083.


The regulations do consider the problem of adjacent feedlots, but only in the context of those held in joint ownership.


The implementation of the monitoring program is allied with the permit program because of the practical problems of identification, although such practice is technically a violation of paragraph 3 of the July 5th regulations.


33 U.S.C.A. §1311(e): "Effluent limitations established pursuant to this section or section 302 of this Act shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this Act."; 33 U.S.C.A. § 1314(b) (1972).

Memorandum at 10-11.

Id. at 9.

Id. at 19.


Wis. Stat. § 144.025(c) (1965); Wis. Stat. § 144.025(d)1,2 (1965).


Proposed DNR regulations, NR 130 (Dec. 1971).

Proposed DNR regulations, NR 130 (Dec. 8, 1972).


Agricultural Census, Table IV-5 (1969).

See p. 775 for further discussion of the term “significant contributor of pollution.”


Economic Impact of Pollution Control: Dairy and Beef Feedlots by David Blitzer for Natural Resources Defense Council, Inc. in Hearings at 159-171.


Memorandum from Lauren R. Oldak to Assoc. Gen. Counsel Water as attached to memorandum from Robert V. Zener to Anson M. Keller, Sept. 24, 1973 in Hearings at 683-84.