Legal Issues of Livestock Odor and Waste Management

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Introduction: Environmental Regulation of Agriculture

Statutes, regulations, and common-law principles govern the activities of livestock producers in the United States. The federal government and 50 individual states have authority to enact laws; federal and state administrative agencies enact regulations to implement these laws. In addition, federal and state courts decide cases that affect agricultural producers. Though producers are subject to many of the same laws that govern other individuals and companies, some laws and regulations apply specifically to agriculture, while others provide exemptions for agriculture.

In recent years, the environmental effects of agriculture, especially livestock production, have become the focus of both regulation and litigation. Environmental liability rules that apply to agricultural producers come in part from federal and state environmental laws and regulations. For example, the federal Clean Water Act and Clean Air Act, among other laws, include provisions that apply to livestock producers. But some agricultural activities have been excluded from environmental regulation or have enjoyed safe harbors in laws that apply to other industries. Moreover, federal subsidies are often available to farmers who implement practices that reduce pollution, and the 2002 Farm Bill continues some environmental subsidies.

This paper first provides background on environmental statutes and regulations, as well as common-law tort liability. It then focuses on federal law provisions, especially under the Clean Water Act and the Clean Air Act, that affect livestock producers.

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2 Local governments – counties, townships, and municipalities -- have authority to regulate (e.g., zoning), but agricultural operations often enjoy some exemptions from local regulation.

3 On these issues, see, e.g., J.B. Ruhl, Farms, Their Environmental Harms, and Environmental Law, 27 Ecology Law Quarterly 263 (2000).


5 For more detail on these federal laws, see Grossman, Margaret Rosso (one of 16 authors, chaired by P.R. Hagenstein), Air Emissions from Animal Feeding Operations: Current Knowledge, Future Needs, chap. 6 (National Research Council, National Academy of Sciences, March 2003).
Statutes and Regulations

Federal environmental laws apply in all 50 states to establish minimum environmental criteria for the nation. Many federal environmental laws include provisions that allow individual states to implement federal laws within their territories. With federal approval and oversight, states enact laws and regulations that meet federal regulatory criteria, issue environmental permits, and enforce the laws. In most cases, states can enact provisions that are stricter than federally required. States may also enact independent environmental laws, as long as those laws do not interfere with federal requirements. Those who violate environmental laws face enforcement from federal and state governments.

Federal and state statutes impose legal obligations and authorize administrative, civil, or even criminal liability for failure to comply. Violation of a statutory or regulatory provision or a requirement imposed in a state or federal environmental permit can result in an enforcement action. The US Environmental Protection Agency (EPA) implements and enforces most federal environmental laws; state environmental agencies have enforcement authority under federally-approved state programs. When authorized by statute, penalties can be assessed in administrative proceedings (e.g., by the EPA) or in a civil judicial enforcement action (i.e., in court). Environmental statutes prescribe maximum monetary penalties, but penalties are sometimes measured by the level of environmental harm (e.g., value of fish killed by a manure spill). Most federal statutes also impose criminal liability (fines or imprisonment) for individuals or business entities, and the number of criminal prosecutions for serious offences has increased in recent years.

Common-law Tort Principles

Livestock producers, like other individuals and entities in the US, face liability under common-law tort principles, usually based in state law, when their actions cause environmental or other damage to the person or property of others. Of course, producers themselves can (and sometimes do) raise claims in tort when they suffer harm from actions of others. Tort claims associated with livestock facilities often result from the presence of odors, but manure spills and improper manure application have also led to lawsuits against producers. Remedies available in tort cases include monetary damage awards and, less often, injunctions of defendant’s behavior.6

Nuisance is the common-law remedy that applies when a producer's activities interfere unreasonably with another person’s use and enjoyment of land, injure life or health, or interfere with public rights. A private nuisance arises from an "invasion of another’s interest in the private use and enjoyment of land."7 Private nuisance often results from an activity on defendant’s land that interferes unreasonably with use of plaintiff’s neighboring land. A public

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7 Restatement (Second) of Torts § 821D (1979).
nuisance is "an unreasonable interference with a right common to the general public." A public nuisance usually affects a significant number of people; cases are normally brought by a government official or (less often) by an individual with a "special injury" (an injury different in kind from members of the general public). A few recent cases have used the theory of anticipated nuisance to prevent construction of livestock facilities, which would (arguably) cause a nuisance.9

Because all persons have the right to reasonable use and enjoyment of their property, nuisance involves a balance of competing interests. A defendant, for example, cannot cause unreasonable harm to a plaintiff, but the plaintiff must endure some inconvenience to accommodate the defendant’s legitimate land-use activities. States have enacted right-to-farm laws that protect certain agricultural operations from nuisance suits;10 most apply when the farm was in operation for a year (or more), and changes in land use near the producer led to the nuisance claim. But producers who violate environmental laws or whose practices are considered improper or negligent may remain vulnerable to nuisance suits.11

Activities that lead to a nuisance claim may also result in a claim of trespass. Trespass is a physical invasion of land that interferes with the plaintiff’s exclusive right to possession and causes damage to the property. It occurs when the defendant enters plaintiff’s land or when defendant knowingly causes something (e.g., pollution) to enter plaintiff’s land.

The tort of negligence focuses on defendant’s conduct. Plaintiff must usually prove that defendant had a duty to conform to a specific standard of conduct (to act with reasonable care), the defendant breached that duty, the plaintiff suffered harm, and the defendant’s breach of duty caused plaintiff’s injury. Thus, tort cases based on negligence require the plaintiff to prove that defendant’s conduct was unreasonable, e.g., by proving failure to comply with accepted (or legally required) waste handling practices.

Strict liability applies when the defendant causes injury while carrying out an activity characterized as abnormally dangerous or ultra-hazardous. In strict liability, the defendant will be liable for damages, even if the activity was carried out with all reasonable care.12 That is, the plaintiff need not prove that defendant’s conduct was negligent. Activities associated with livestock production are not likely to be considered ultra-hazardous.

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8 *Id.* § 821B.


11 The Iowa Supreme Court held that an Iowa right to farm law was unconstitutional. Bormann v. Board of Supervisors, 584 N.W.2d 309 (Iowa 1998), *cert. denied*, 525 U.S. 1172 (1999).

12 Restatement (Second) of Torts § 520 & comment f (1979). To identify an abnormally dangerous activity, courts consider factors like the degree of risk, likelihood of harm, ability to eliminate risk, commonness of use, value to society, and appropriateness of the location.
Livestock Producers and the Clean Water Act

The federal Clean Water Act (CWA),\textsuperscript{13} was designed to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."\textsuperscript{14} The CWA protects water quality through regulatory measures, including ambient water quality standards, limits on effluents, and permits. Under the CWA, concentrated animal feeding operations (CAFOs) are defined as "point sources"\textsuperscript{15} of water pollution. Therefore, they are subject to requirements of the National Pollutant Discharge Elimination System (NPDES) and may discharge pollutants only in compliance with an NPDES permit.\textsuperscript{16} Animal feeding operations (AFOs) that are not regulated as point sources are considered nonpoint sources, subject to rather weak state planning programs under the CWA.\textsuperscript{17} Some nonpoint sources will also be regulated through state total maximum daily load (TMDL) programs required by the CWA.\textsuperscript{18}

The EPA first enacted regulations for CAFOs in the 1970s: Effluent Limitations Guidelines and Standards (ELGs) in 1974,\textsuperscript{19} and NPDES permit requirements in 1976.\textsuperscript{20} Under these regulations, only a small number of AFOs were required to obtain NPDES permits. In 2001, the EPA estimated that about 12,660 US livestock facilities confined more than 1000 animal units, but that only about 4000 facilities had NPDES permits.\textsuperscript{21}

Consolidation of the livestock industry, with fewer and larger facilities, led to a review of the CAFO regulations, beginning in 1992.\textsuperscript{22} In 1998, the US \textit{Clean Water Action Plan} identified polluted runoff from agriculture as one of the serious water quality problems facing the United

\begin{itemize}
\item \textsuperscript{13} 33 USC §§ 1251-1387.
\item \textsuperscript{14} Id. § 1251(a).
\item \textsuperscript{15} "The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, . . . . concentrated animal feeding operation, . . . from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture." 33 USC § 1362(14).
\item \textsuperscript{16} Id. § 1342.
\item \textsuperscript{17} Id. §§ 1288, 1313.
\item \textsuperscript{18} Id. § 1313(d). A TMDL establishes the amount of a pollutant that an impaired water body can receive without exceeding water quality standards. Both point and nonpoint sources of the pollutant may be considered in establishing TMDLs, which are to be used where effluent limitations are not stringent enough to achieve water quality standards. See Pronolino v. Nasti, 291 F.3d 1123 (9th Cir. 2002), cert. denied, 123 S. Ct. 2573 (2003).
\item \textsuperscript{20} 41 Fed. Reg. 11458 (1976), codified at 40 CFR part 122.
\item \textsuperscript{22} See 66 Fed. Reg. 2960, 2965-66 (2001). In the late 1990s, pork producers and the poultry industry worked with the EPA to develop voluntary environmental compliance programs. 66 Fed. Reg. at 2966.
\end{itemize}
States and recommended that EPA and USDA develop a national strategy to minimize environmental and public health impacts of livestock production. After publishing preliminary documents, USDA and EPA cooperated to prepare the Unified National Strategy for Animal Feeding Operations. This Strategy, from March 1999, established a national goal to minimize water pollution from confinement facilities and land application of manure. It indicated that AFOs would be expected to develop and apply comprehensive nutrient management plans.

New Federal CAFO Regulations

In January 2001, EPA proposed regulations that would revise both the NPDES provisions that define CAFOs and require permits and the ELGs that set technology-based standards for effluent limitations from CAFOs. After considering comments and amending the proposal, the EPA enacted its new regulations in December 2002. The EPA's intent was to enact regulations "based on sound science and economics, promote emerging technologies, and protect watersheds." The agency's guiding principles were simplicity and clarity, emphasis on large CAFOs, flexibility for states, and sound nutrient management planning. The new regulations are expected to increase the number of facilities that will be defined as CAFOs and must therefore operate under NPDES permits. In Illinois, for example, the new regulations could affect 500 Large CAFOs and 2700 Medium CAFOs. The following discussion briefly describes producers' obligations under the regulations.

NPDES Permits

Under the NPDES regulations, an "animal feeding operation" (AFO) is a lot or facility where animals are confined and fed or maintained for a total of 45 days or more in any 12-month period, and where crops, vegetation, forage growth, or post-harvest residues are not present during the normal growing season. A "concentrated animal feeding operation" (CAFO) is an

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29 Both environmental NGOs and farm organizations have filed lawsuits to challenge the regulations. Cases brought by environmentalists and industry will be heard in the US Court of Appeals for the Second Circuit.
AFO defined by regulation as a Large or a Medium CAFO or specifically designated as a CAFO.30

Animal numbers define Large and Medium CAFOs.31 A Large CAFO is an AFO that stables or confines, for example, 2,500 swine weighing 55 pounds or more, or 10,000 swine weighing less than 55 pounds.32 A Medium CAFO has fewer animals: 750 to 2499 swine weighing 55 pounds or more, or 3000-9999 swine weighing less than 55 pounds. A Medium CAFO also discharges pollutants into waters of the US either directly or through a man-made device.33 Any other AFO that discharges water pollutants can be designated as a CAFO if it contributes significantly to pollution of US waters.34 Under prior regulations, no AFO was considered a CAFO if it discharged only in a 25-year, 24-hour storm event, but that exception has been omitted from new regulations that define CAFOs.35

All CAFOs must operate under an individual or general NPDES permit.36 Facilities newly defined as CAFOs under the regulation must seek to obtain coverage under a permit no later than 13 February 2006; facilities already defined as CAFOs under prior regulations were required to have or apply for a permit by 14 April 2003.37 Both production areas and land application areas are now regulated.38 Discharges of manure, litter, or process wastewaters as a result of applications to land under control of the CAFO are subject to NPDES permit requirements. As required by the CWA, however, agricultural storm water discharges are excepted.39

30 40 CFR § 122.23(b)(1), (2). Two or more AFOs under common ownership are considered a single AFO for determining the number of animals at an operation if they are adjoining or use a common waste disposal area or system.

31 68 Fed. Reg. at 7189. Prior regulations used animal units, rather than animal numbers. The new regulations also apply to more types of facilities -- e.g., poultry facilities using “dry” manure handling and veal calf operations are now regulated.

32 40 CFR § 122.23(b)(4). Other Large CAFOs hold 700 mature dairy cows, 1,000 veal calves, 1,000 cattle other than mature dairy cows or veal calves, 500 horses, 10,000 sheep or lambs, 55,000 turkeys, 125,000 chickens (other than liquid manure handling), 30,000 laying hens or broilers (using liquid manure handling), 82,000 laying hens (other than liquid manure handling), 30,000 ducks (other than liquid manure handling), or 5,000 ducks (liquid manure handling).

33 Id. § 122.23(b)(6).

34 Id. § 122.23(c).

35 Id. part 122, Appendix B (2001). The 25-year, 24-hour storm event remains relevant in the context of ELGs.

36 Id. §§ 122.21(a)(1), 122.23(d). When a general permit has been approved, individual facility operators file a notice of intent for coverage under the general permit and must include the information required for individual permits. Id. §§ 122.21(i), 122.28(b)(ii).

Compliance with permit requirements normally constitutes compliance with requirements of the CWA. 33 USC § 1342(a), (k).

37 40 CFR § 122.23(g). Other deadlines apply to new or modified operations that will be CAFOs.

38 40 CFR § 122.23(e). These areas are defined in § 122.23(b)(3), (8) and § 412.2(e)(h).

39 33 USC § 1362(14). Regulations thus prescribe that "where the manure, litter or process wastewater has been applied in accordance with site specific nutrient management practices that ensure
For Large CAFOs, permits will impose technology-based standards established by the newly-enacted ELGs, discussed below. Because ELGs do not apply to other CAFOs, the permit writer will use professional judgment to establish technology-based requirements for production and land application areas of the CAFO. All permits must require CAFOs to develop and implement (by 31 December 2006) a nutrient management plan that includes best management practices and procedures. Permits must impose recordkeeping requirements, annual reports, and (for Large CAFOs only) information and recordkeeping about manure transfer. CAFO operators must maintain permits, even after closure, until there is no remaining potential for discharge.

The CWA allows states to implement the NPDES permit program, provided that state requirements are at least as strict and as broad as federal requirements. At the end of 2002, 45 states (including Illinois) and the Virgin Islands had authority to implement the NPDES program; in the other states and territories, the US EPA regional offices issue NPDES permits. To comply with new regulations, states must revise their NPDES programs within one year (by February 2004) or, if legislation is necessary, two years. Procedures for issuing a general permit may take an additional year.

**Effluent Limitations Guidelines**

The new EPA regulations establish ELGs and other performance standards for Large CAFOs that confine horses and sheep; ducks; dairy cows and cattle other than veal calves; and swine, poultry, and veal calves. A separate subpart of the regulation governs each animal group, though many requirements are similar or identical. Regulations apply to manure, litter, and process wastewater discharges from Large CAFOs.

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40 CFR § 122.23(3).


40 CFR § 122.42(e).

Id. § 122.23(d)(2), (f).  A Medium CAFO does not qualify for this exemption, likely because a Medium CAFO, by definition, discharges pollutants.

33 USC § 1342(b).

68 Fed. Reg. 7176, 7185 (2003).  Oklahoma administers its NPDES program, but has no authority to regulate CAFOs. States without NPDES permitting authority are Alaska, Arizona, the District of Columbia, Idaho, Massachusetts, New Hampshire, and New Mexico. No tribes are authorized, nor are Puerto Rico and other territories.  Id.  A brief summary of state NPDES implementation and other regulation of CAFOs appears at 66 Fed. Reg. at 2968-70.


40 CFR part 412.  Subparts A (horses and sheep) and B (ducks) are less detailed than Subparts C (dairy cows and cattle other than veal calves) and D (swine, poultry, and veal calves).
The ELGs prescribe standards for CAFOs with the animal types listed above and under specific technology standards. For most animals and technology standards, including swine, there shall be no discharge of process wastewater pollutants (or of manure, litter, or process wastewater pollutants) into US waters from the production area of the facility. When precipitation causes an overflow, discharge into US waters is permitted only if the production area is "designed, constructed, operated and maintained" to accommodate runoff and direct precipitation from a 25-year, 24-hour rainfall event and other requirements are met. These include visual inspections, depth markers on open liquid impoundments, prompt corrective actions, proper handling of dead animals, and detailed recordkeeping for production areas.

Standards for CAFO land application areas require the operator to develop and implement best management practices (BMPs) and to maintain detailed records. BMPs for land application govern CAFOs that confine swine, as well as dairy and beef cattle, poultry, and veal calves. Each CAFO must develop and implement a nutrient management plan "based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field." Application rates must minimize nitrogen and phosphorus transport; manure and soil must be analyzed; and equipment must be inspected. The plan should be based on the most limiting nutrient. That is, when soils have high phosphorus, the plan must be phosphorus based; with low phosphorus, plans can be nitrogen based. More land to apply manure is usually required for a phosphorus limit. The nutrient management plan must normally require a 100-foot setback, or a 35-foot vegetated setback, from (conduits to) surface waters.

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47 These include BPT (best practicable control technology currently available), BCT (best conventional pollutant control technology), BAT (best available technology economically achievable), and NSPS (new source performance standards).


49 New source performance standards for swine, poultry, and veal calves require facilities to accommodate a 100-year, 24-hour rainfall event. 40 CFR § 412.46. BPT for horses and sheep must accommodate only a 10-year, 24-hour rainfall event. Id. § 412.12.

49 E.g., 40 CFR § 412.31(a) (BPT for dairy cows and cattle other than veal calves, with similar requirements for BCT, BAT, and NSPS). Voluntary site-specific alternative performance standards may be permitted with supporting technical analysis.

50 Id. § 412.37(a), (b).

51 E.g., Id. §§ 412.31(b), 412.4 (BMPs), 412.37(c) (land application records). BMPs apply to Subparts C (dairy cows and cattle other than veal calves) and D (swine, poultry, and veal calves), but not to Subparts A (horses and sheep) or B (ducks).

52 Id. § 412.4(c)(1).

53 Marc Ribaudo et al., Manure Management for Water Quality: Costs to Animal Feeding Operations of Applying Manure Nutrients to Land at 11, 38. ERS, USDA, Agricultural Economic Report
Complying with the new regulations, especially the nutrient management plan, is likely to increase costs for livestock producers. USDA research on hog farms shows that fewer than half of farms meet the nitrogen-based standard for manure application, and even fewer meet the phosphorus-based standard. Producers in the Cornbelt, where more land is available, can meet the standards more easily. A USDA report published in June 2003 analyzes the costs and benefits of applying manure nutrients to land in compliance with the new EPA regulations.

Air Emissions from Livestock Facilities

Clean Air Act

Air emissions produced by livestock facilities include several pollutants regulated under the federal Clean Air Act (CAA), which governs air quality in the US. Important "substances of concern" emitted by livestock facilities are ammonia, hydrogen sulfide, particulate matter, nitrous oxide, nitric oxide, methane, volatile organic compounds, and odor. Accurate measurement of air emissions from AFOs, however, has proved difficult. The complexity of substances and their sources and varied production and geographic conditions mean that more research on measurement of air emissions is needed.

The CAA includes standards for ambient air quality to protect public health and welfare, special measures for regions that have not attained those standards (nonattainment areas), operating permits for stationary sources of air pollution, control technology for new sources of air pollution, measures to control hazardous air pollutants, and other programs.

No. 824 (June 2003). This report refers to the most limiting nutrient standard, but the regulation is less clear.

54 40 CFR § 412.4(c)(2)-(4).
55 Ribaudo et al., supra note 53, at 14, 16.
57 The CAA defines "air pollutant" as "any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant . . [identified by the EPA Administrator]." 42 USC § 7602(g).
58 42 USC §§ 7401-7671q, as amended.
59 See Air Emissions, supra note 5, chap. 6.
60 Id. at 16, 50-56.
61 Id. at 22.
The EPA implements the CAA and enacts regulations for its various programs.\textsuperscript{62} The EPA approves state plans enacted to meet federal requirements,\textsuperscript{63} delegates to states the authority to issue operating permits for air pollution sources,\textsuperscript{64} and oversees state air pollution control agencies. States normally enact legislation that complies with the CAA and is at least as stringent as federal requirements.\textsuperscript{65} States assign responsibility for air quality to state or local air pollution control agencies,\textsuperscript{66} which enforce the Act in their territories. States also ensure that their air quality meets federal standards through state implementation plans, permits for air pollution sources, and other measures.

The so-called "criteria pollutants" and the hazardous air pollutants (HAPs) are a major focus of regulation. To regulate criteria pollutants, the national ambient air quality standards (NAAQS) program is central.\textsuperscript{67} The CAA prescribes that primary NAAQS should establish levels of air quality that will protect the public health with an adequate margin of safety. Secondary ambient air quality standards, when enacted, should protect the public welfare.\textsuperscript{68} The EPA has established primary NAAQS for six criteria pollutants: sulfur dioxide, nitrogen dioxide,
particulate matter (PM$_{10}$ and PM$_{2.5}$), carbon monoxide, ozone, and lead. In the states, these NAAQS are met by state implementation plans (SIPs) and new source performance standards.

Hazardous air pollutants (HAPs) present a serious threat to human health or the environment. They are identified in a statutory list that can be modified by EPA regulation. The EPA currently regulates 188 HAPs. Precursors of ozone (reactive VOCs) and secondary PM$_{2.5}$ (ammonia), both emitted by livestock facilities, are regulated air pollutants even though they are not listed as criteria pollutants or HAPs.

State Implementation Plans (SIPs) translate national ambient standards into emission limitations that govern individual sources of air pollution. The state SIP must implement, maintain, and enforce the primary NAAQS in the state or an air quality control region in the state. The CAA prescribes the required elements of each SIP, and regulations provide more detailed requirements for state plans. After approval by the EPA, a SIP can be enforced as both state and federal law.

Under the CAA and the relevant state SIP, the livestock producer who plans to construct a new livestock facility may have to obtain an air pollution permit prior to construction or operation, if the facility is large enough to be considered a "major" source, as defined by statute and regulation. Generally, a major source is a stationary source that emits, or has potential to emit, 100 tons per year or more of any air pollutant.

Individual facilities are governed by pre-construction and operating permits issued under state permitting programs. The pre-construction permit requirement applies to a major new source or a major modification of an existing source. Permit requirements in specific states may be more stringent and also govern “minor” new or modified sources. The pre-construction permit will normally include a description of proposed air pollution abatement systems, a determination of

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69 Id. § 7409; 40 CFR part 50. NAAQS protect human health by setting maximum ambient concentrations and averaging time periods for these criteria pollutants.

70 42 USC § 7412(b).

71 Under the CAA, each state has "primary responsibility for assuring air quality within the entire geographic area comprising such State by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained." 42 USC § 7407(a).

72 Id. § 7410(a)(1).

73 Id. § 7410. This section sets out numerous specific requirements for SIPs.

74 40 CFR part 51.

75 The pre-construction permit is required both under provisions that govern the prevention of significant deterioration (PSD) in areas where NAAQS have been met, 42 USC § 7475, and under provisions for nonattainment areas where NAAQS have not been met, id. § 7503. The definition of "major" differs between PSD and nonattainment areas. 40 CFR § 52.51(b)(1); Brownell, supra note 67, at 228-32. The permit threshold is lower in a nonattainment area, and permit conditions are stringent.

76 Brownell, supra note 67, at 238.
the allowable emission rate, and other requirements. In addition, most major stationary sources of air pollution are required to obtain operating permits.77 Permits must include enforceable emission limitations and standards, a schedule of compliance, reporting requirements, and other conditions.78

Major sources, as defined by the CAA and EPA regulations, pay an annual permit fee, based on total emissions of regulated pollutants. Fugitive emissions are not considered in determining whether a facility is a "major stationary source" of air pollution.79 But once the major source threshold (e.g., 100 tons per year of any pollutant) is met, the permit fee is determined by "actual emissions" of all regulated pollutants,80 including fugitive as well as other emissions.

Most agricultural operations are believed to be minor sources of air pollution; therefore, few agricultural facilities have been required to comply with the operating permit requirement. Environmentalists, however, have argued that many large livestock facilities emit more 100 tons of a regulated pollutant (especially ammonia) per year and should therefore be regulated as major sources.81 As noted above, however, lack of reliable measurement techniques for some sources has impeded regulatory enforcement.

In practice, enforcement against agricultural operations is often triggered by complaints, especially when operations are perceived to cause a nuisance. If investigation confirms that a violation has occurred, penalties may be assessed against the facility. Violation of CAA provisions, including permit requirements, can result in substantial penalties.82 For example, the EPA administrator is authorized to file a civil action for an injunction or a civil penalty of up to $25,000 per day for each violation of certain CAA provisions.83 States, too, have authority to enforce CAA provisions under EPA-approved state programs.

77 42 USC §§ 7661-7661f. The EPA has authority to approve each state's permit plan and each state-issued permit.

78 States may provide that compliance with the permit is considered compliance with "applicable provisions" of the CAA. 42 USC § 7661c(f).

79 Id. § 7602(j); 40 CFR §70.2. Fugitive emissions have proven controversial, in light of an EPA proposal to call many agricultural air emissions, including emissions from waste lagoons and barns, "fugitive," and thus negate major source requirements for many facilities. Air pollution administrators and environmentalists oppose this proposal. See Lloyd L. Eagan (State and Territorial Air Pollution Program Administrators) & Ellen Garvey (Assoc. of Local Air Pollution Control Officials), Letter to Christine Todd Whitman, then-EPA Administrator, 7 Apr. 2003, http://www.sierraclub.org/pressroom/cafo_papers/STAPPA_letter_to_Whitman.pdf (last visited 11 Oct. 2003).

80 40 CFR § 70.9.


82 42 USC § 7413.

83 Id. § 7413(b). Administrative penalties and criminal penalties are also authorized.
CERCLA and EPCRA

Both the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)\textsuperscript{84} and the Emergency Planning and Community Right-to-Know Act (EPCRA)\textsuperscript{85} include reporting requirements that may apply to emissions from large livestock facilities. These federal laws require reports from facilities that release\textsuperscript{86} a reportable quantity of certain hazardous pollutants. Hydrogen sulfide, ammonia, and some volatile organic compounds are among the reportable substances released by livestock facilities. For both ammonia and hydrogen sulfide, the reportable quantity is 100 lbs/day (18.3 tons/year).\textsuperscript{87}

The EPA has rarely enforced the reporting requirement for livestock facilities that release hazardous air pollutants. But statutory provisions allow citizens to file suit to enforce these laws.\textsuperscript{88} Therefore, large livestock operations are vulnerable to citizen suits for failure to report.

Proposed Industry-EPA "Safe Harbor"

Though strict air pollution statutes and regulations have helped to improve US air quality, livestock facilities have posed special issues. Enforcement of applicable provisions of the CAA, CERCLA, and EPCRA requires accurate measurement of emissions, arguably more accurate than present techniques allow.\textsuperscript{89} But monitoring air emissions from confinement buildings, feedlots, waste lagoons, and other components of livestock facilities has been controversial. To protect AFOs while scientists develop effective monitoring techniques, representatives of the livestock industry have suggested that EPA implement a livestock and poultry monitoring and safe harbor agreement.\textsuperscript{90}

An October 2003 draft of the proposed safe harbor agreement\textsuperscript{91} indicates that the safe harbor is intended to address emissions of air pollutants and hazardous substances and to ensure that participating AFOs (eventually) comply with provisions of the CAA and CERCLA, by applying emission-estimating methodologies developed in a monitoring program funded by participating

\begin{footnotesize}
\begin{enumerate}
\item CERCLA, 42 USC § 9659; EPCRA, 42 USC § 11046(a).
\item See generally Air Emissions, \textit{supra} note 5.
\end{enumerate}
\end{footnotesize}
AFOs. Under the draft agreement, each participating AFO will pay a civil penalty of $500 and contribute $2,500 to implement a nationwide monitoring program for AFOs. Each participant must also make its facility available for monitoring, but it is likely that relatively few facilities will actually be monitored. A monitoring contractor (an independent third party) will conduct the emissions monitoring program according to a plan and submit regular reports to the EPA. Monitoring must be completed within two years, and emissions to be monitored are particulates, ammonia, hydrogen sulfide, volatile organic compounds, and nitrogen oxides. The agreement is intended to reach large AFOs, but any size AFO may participate.

In exchange for participation, the EPA will agree not to sue facilities for failure to comply with certain CAA permit requirements, CAA obligations triggered by emission thresholds, and required reporting under CERCLA. After EPA publishes methodologies for estimating emissions, however, facilities must comply with CAA requirements, install emission controls if necessary, make reports required under CERCLA, and abate nuisances caused by the facility. Moreover, facilities agree not to contest emission-estimating methodologies developed through monitoring in defense of an enforcement lawsuit. The agreement imposes other obligations on facilities that participate. It does not prevent states from enforcing their own laws.

Both members of the environmental community and state and local air pollution administrators have expressed strong objections to what is characterized as a grant of "retrospective and prospective immunity from liability" for every AFO in the United States. Environmental groups object to the fact that the safe harbor policy would exempt AFOs from obtaining permits required by the CAA and that it might interfere with citizen suits filed to enforce the CAA. Moreover, the safe harbor would delay the abatement of AFO air emissions that pose significant health consequences. Air pollution administrators asserted that participating AFOs would receive a waiver of enforcement that applies retroactively, during the monitoring period, and perhaps forever. (The October 2003 draft includes a two-year monitoring program, which may weaken this objection.). Moreover, the waiver would be broadly defined and would include SIP provisions that govern source emissions. Fewer than one percent of the facilities that receive a waiver would be monitored, which could result in limited or unrepresentative data. Further, participants would not be required to adopt BMPs.

No final agreement has been reached, and negotiations continue. Before the safe harbor is implemented, the document should be published in the Federal Register, with opportunity for public comment. But litigation over the proposed agreement has already begun. In September 2003, environmental groups filed suit against the EPA in the US District Court for the District of


93 Some fear that a safe harbor would prevent the litigation of Sierra Club v. Tyson Foods (W.D. Ky), which asserts that Tyson is responsible as an operator under CERCLA for toxic releases at farms of contractors. EPA Eyes Dialogue with States in Wake of Criticisms of CAFO Plans, Insideepa.com, 16 May 2003.

94 Eagan & Garvey, supra note 79.
Columbia, alleging that the EPA violated the Freedom of Information Act by failing to disclose documents about the proposed agreement.  

EQIP Funding for Livestock Producers

Federal financial assistance is available to help livestock producers meet air and water quality requirements under the CAA, the CWA, and other environmental laws. The Environmental Quality Incentives Program (EQIP) was enacted in 1996, in part to help livestock and other producers comply with federal and state environmental regulations. In the 2002 Farm Bill, Congress reauthorized EQIP through 2007 and increased authorized funding significantly. USDA's Natural Resources Conservation Service (NRCS) administers EQIP; NRCS published final regulations for EQIP in May 2003.

EQIP is intended to help producers meet environmental quality criteria, to provide assistance to install and maintain conservation practices, and to streamline conservation planning and regulatory compliance. EQIP focuses especially on "beneficial, cost effective changes to . . . nutrient management associated with livestock." The program helps producers to comply with regulatory requirements for soil, water and air quality, wildlife habitat, and surface and ground water conservation. Under NRCS regulations, reduction of various types of nonpoint source pollution is first priority; second priority is reduction of emissions of regulated air pollutants.

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96 Farm Bill, supra note 4. The Conservation Title reauthorized and amended a number of conservation programs, including EQIP, enacted in prior agricultural legislation.

97 EQIP is now part of a program now called the Comprehensive Conservation Enhancement Program; under prior law, it was part of the Environmental Conservation Acreage Reserve Program. $1.3 billion is authorized in fiscal 2007.


99 16 USC § 3839aa.

100 Id. § 3839aa(4). In contrast to EQIP, federal money is not available for animal waste facilities under the Conservation Security Program (CSP), enacted in the 2002 Farm Bill, which pays producers to adopt or maintain conservation practices that help to protect or improve the quality of soil, water, air, energy, plant and animal life, and for other conservation purposes. The statute specifies that payment may not be made for "construction or maintenance of animal waste storage or treatment facilities or associated waste transport or transfer devices for animal feeding operations." Id. § 3838c(b)(3)(A).

101 These include, e.g., particulate matter, nitrogen oxides (NOx), volatile organic compounds, and ozone precursors and depleters. 7 CFR § 1466.4(a)(1), (2). The other two national priorities are reduction in soil erosion and sedimentation from farmland and conservation of habitat for at-risk species. Id. § 1466.4(a)(3), (4).
To achieve these priorities, EQIP authorizes contracts, lasting from one to 10 years, with producers who agree to implement eligible environmental and conservation practices in exchange for cost-share and incentive payments, as well as technical assistance.102 "Practice" is defined as structural practices (including animal waste management facilities), land management practices (including nutrient and manure management), and comprehensive nutrient management planning practices.103 In determining the amount and rate of incentive payments, "great significance" can be given to a practice that promotes "residue, nutrient, pest, invasive species, or air quality management."104

The 2002 Farm Bill makes more EQIP money available to livestock producers; it targets 60% of program funding, measured at national level, for environmental practices relating to livestock production.105 Livestock producers throughout the United States are eligible, and even large facilities may qualify for payments for construction of waste management facilities. A livestock producer whose plan of operation includes an animal waste storage or treatment facility is eligible for cost-share payments if, along with other requirements, that producer develops and implements a comprehensive nutrient management plan.106

**Conclusion**

In recent years, the legal climate for livestock producers has changed. Concentration in the livestock industry has resulted in large facilities, often with accompanying increases in emissions to water and air. Regulatory changes have imposed additional obligations on producers and may increase production costs. Moreover, in some states, suits have been filed against large producers to compel compliance with environmental laws, and neighbors have sued to abate odor and other nuisances.

Livestock producers can help to avoid legal controversy by seeking competent technical advice and following legal requirements. It is important, for example, to choose an appropriate location for the facility, obtain proper permits under federal and state law, comply with set-back and numerous other state law requirements, and follow appropriate nutrient management practices.

102 Payments to an individual or entity are limited to $450,000 for all contracts entered during fiscal years 2002 through 2007. Beginning in fiscal 2003, EQIP payments may not be made to an individual or entity whose average adjusted gross income for the previous three years exceeds $2.5 million, unless 75% of that income came from farming, ranching, or forestry. NRCS, Environmental Quality Incentives Program. Fact Sheet (June 2002); see 7 CFR § 1466.24(b)(7) and 7 CFR part 1400, subpart G.

103 16 USC § 3839aa-1(5); 7 CFR § 1466.3.

104 16 USC § 3839aa-2(a), (e) (emphasis added).

105 16 USC § 3839aa-2(g); 7 CFR § 1466.8(d).

106 16 USC § 3839aa-5(a)(3); 7 CFR §§ 1466.9(c), § 1466.21(b)(3)(iv). The producer may also be eligible for incentive payments to encourage development of the plan. 7 CFR § 1466.23(b).