



Highlights of [GAO-08-944](#), a report to congressional requesters

Why GAO Did This Study

Concentrated Animal Feeding Operations (CAFO) are large livestock and poultry operations that raise animals in a confined situation. CAFOs can improve the efficiency of animal production but large amounts of manure produce can, if not properly managed, degrade air and water quality. The Environmental Protection Agency (EPA) is responsible for regulating CAFOs and requires CAFOs that discharge certain pollutants to obtain a permit.

This report discusses the (1) trends in CAFOs over the past 30 years, (2) amounts of waste they generate, (3) findings of key research on CAFOs' health and environmental impacts, (4) EPA's progress in developing CAFO air emissions protocols, and (5) effect of recent court decisions on EPA's regulation of CAFO water pollutants. GAO analyzed U.S. Department of Agriculture's (USDA) data from 1982 through 2002, for large farms as a proxy for CAFOs; reviewed studies, EPA documents, laws, and regulations; and obtained the views of federal and state officials.

What GAO Recommends

To more effectively regulate CAFOs, GAO recommends that EPA complete its inventory of permitted CAFOs, reassess the current nationwide air emissions monitoring study, and establish a strategy and timetable for developing a process-based model for measuring CAFO air emissions. EPA partially agreed with GAO's recommendations.

To view the full product, including the scope and methodology, click on [GAO-08-944](#). For more information, contact Anu Mittal (202) 512-3841, mittala@gao.gov.

CONCENTRATED ANIMAL FEEDING OPERATIONS

EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern

What GAO Found

Because no federal agency collects consistent, reliable data on CAFOs, GAO could not determine the trends in these operations over the past 30 years. However, using USDA data for large farms that raise animals as a proxy for CAFOs, it appears that the number of these operations increased by about 230 percent, going from about 3,600 in 1982 to almost 12,000 in 2002. Also, during this 20-year period the number of animals per farm had increased, although it varied by animal type. Moreover, GAO found that EPA does not have comprehensive, accurate information on the number of permitted CAFOs nationwide. As a result, EPA does not have the information it needs to effectively regulate these CAFOs. EPA is currently working with the states to establish a new national data system.

The amount of manure generated by large farms that raise animals depends on the type and number of animals raised, but large operations can produce more than 1.6 million tons of manure a year. Some large farms that raise animals can generate more raw waste than the populations of some U.S. cities produce annually. In addition, according to some agricultural experts, the clustering of large operations in certain geographic areas may result in large amounts of manure that cannot be effectively used as fertilizer on adjacent cropland and could increase the potential of pollutants reaching nearby waters and degrading water quality.

Since 2002, at least 68 government-sponsored or peer-reviewed studies have been completed that examined air and water quality issues associated with animal feeding operations and 15 have directly linked air and water pollutants from animal waste to specific health or environmental impacts. EPA has not yet assessed the extent to which these pollutants may be impairing human health and the environment because it lacks key data on the amount of pollutants that are being emitted from animal feeding operations.

As a first step in developing air emissions protocols for animal feeding operations, in 2007, a 2-year nationwide air emissions monitoring study, largely funded by industry, was initiated. However, as currently structured, the study may not provide the scientific and statistically valid data it was intended to provide and that EPA needs to develop air emissions protocols. Furthermore, EPA has not established a strategy or timetable for developing a more sophisticated process-based model that considers the interaction and implications of all emission sources at an animal feeding operation.

Two recent federal court decisions have affected EPA's ability to regulate water pollutants discharged by CAFOs. The 2005 *Waterkeeper* case required EPA to abandon the approach that it had proposed in 2003 for regulating CAFO water discharges. Similarly, the 2006 *Rapanos* case has complicated EPA's enforcement of CAFO discharges because EPA believes that it must now gather significantly more evidence to establish which waters are subject to the Clean Water Act's permitting requirements.