

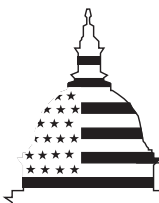
GAO

Report to the Ranking Member,
Committee on Agriculture, Nutrition
and Forestry, U.S. Senate

January 2003

LIVESTOCK AGRICULTURE

Increased EPA Oversight Will Improve Environmental Program for Concentrated Animal Feeding Operations



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Highlights

Highlights of [GAO-03-285](#), a report to the Ranking Member, Committee on Agriculture, Nutrition and Forestry, U.S. Senate

Why GAO Did This Study

Congress is concerned that waste from animal feeding operations continues to threaten water quality. In light of this concern, GAO was asked to review the Environmental Protection Agency's (EPA) administration of its regulatory program for animal feeding operations and to determine the potential challenges states and EPA may face when they begin to implement the revisions to this program. GAO surveyed all EPA regional offices and four states with large numbers of animal feeding operations that may be subject to EPA regulations.

What GAO Recommends

GAO recommends that EPA

- develop and implement a comprehensive tactical plan that identifies resource requirements and how the agency will carry out its increased oversight responsibilities under the revised program; and
- work with authorized states to develop and implement their own plans that will identify resource needs and how they intend to carry out their increased permitting, inspection, and enforcement responsibilities within specified time frames.

www.gao.gov/cgi-bin/getrpt?GAO-03-285.

To view the full report, including the scope and methodology, click on the link above. For more information, contact Larry Dyckman at (202) 512-3841 or dyckmanl@gao.gov.

LIVESTOCK AGRICULTURE

Increased EPA Oversight Will Improve Environmental Program for Concentrated Animal Feeding Operations

What GAO Found

Until the mid-1990s, EPA placed little emphasis on and had directed few resources to its animal feeding operations permit program because it gave higher priority to other sources of water pollution. In addition, regulatory exemptions have allowed many large operations to avoid regulation. As a result of these problems, many operations that EPA believes are polluting the nation's waters remain unregulated.

Implementation of revised regulations raise management and resource challenges for the states and the agency. For example, because the number of animal feeding operations subject to the regulations will increase dramatically, states will need to increase their efforts to identify, permit, and inspect facilities and take appropriate enforcement actions against those in noncompliance. For its part, EPA will need to increase its oversight of state programs to ensure that the new requirements are adopted and implemented. Neither the states nor EPA have determined how they will meet these challenges.

Concentrated Animal Feeding Operation



Source: USDA.

A concentrated animal feeding operation is a facility that discharges animal wastes to surface waters under certain conditions and is, therefore, subject to regulation.

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Abbreviations

CAFO	concentrated animal feeding operation
EPA	Environmental Protection Agency
NPDES	National Pollutant Discharge Elimination System
USDA	U.S. Department of Agriculture



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United States General Accounting Office
Washington, DC 20548

January 16, 2003

The Honorable Tom Harkin
Ranking Member
Committee on Agriculture, Nutrition
and Forestry
United States Senate

Dear Senator Harkin:

Livestock production generated \$106 billion in farm revenue, or more than one-half of all farm revenue in 2001. Intensive livestock production—in which large numbers of poultry, swine, and dairy and beef cattle are held in confinement facilities—accounted for about \$80 billion of this revenue. These confinement facilities raise concerns about water quality because the animals produce large quantities of waste—many times more waste than humans annually—and these wastes contribute to impairment of the nation’s waterways. To minimize environmental problems, animal feeding operations contain these wastes in storage facilities and periodically dispose of them, usually by spreading them on the land as fertilizer. Despite these efforts, animal feeding operations are significant contributors to impaired water quality in the nation’s rivers and lakes, according to the Environmental Protection Agency (EPA).

Because wastes from animal feeding operations may degrade water quality, the Clean Water Act requires EPA and authorized states to regulate these operations similar to the way they regulate municipal and industrial waste treatment facilities. Specifically, EPA developed effluent guidelines for establishing limits on the discharge of pollutants from these operations into surface waters. As stipulated in the act, the agency and authorized states enforce these limits through permits issued under the National Pollutant Discharge Elimination System (NPDES) permit program.

Animal feeding operations that discharge wastes to surface waters under certain conditions are called concentrated animal feeding operations (CAFO) and are required to obtain discharge permits. CAFOs are generally defined as animal feeding operations that have more than 1,000 animal units¹ but also include smaller operations that discharge

¹ An animal unit is a representation of size among animal types EPA uses for permitting purposes. For example, one animal unit is equivalent to one beef cattle or 2.5 adult swine.

directly into surface waters. EPA has authorized 44 states and the U.S. Virgin Islands to administer the discharge permit program for CAFOs since passage of the act in 1972.² To become an authorized state, the state must have discharge permit requirements that are at least as stringent as the requirements imposed under the federal program and must contain several key provisions such as public participation in issuing permits. The act provides for EPA's withdrawal of a state's authorization if the state has not adequately administered its program. EPA's 10 regional offices oversee the 44 authorized states and the U.S. Virgin Islands and administer the program directly in the remaining states.³ EPA also provides grants to authorized states to help them implement the permit program. In fiscal year 2002, \$145 million were appropriated for these grants.

Although it has regulated waste discharges since the mid-1970s, EPA continues to report serious impairment to the nation's waters from these discharges. On October 30, 1989, the Natural Resources Defense Council and Public Citizen sued EPA,⁴ alleging that the agency had failed to comply with the Clean Water Act.⁵ In the ensuing settlement, EPA agreed to, among other things, revise its effluent limitation guidelines and permitting regulations for CAFOs.⁶ As agreed, EPA published proposed revisions to the regulations for public comment in January 2001 and issued its final regulations on December 15, 2002.

You asked us to (1) identify the key shortcomings of the of CAFO program, (2) assess the potential challenges the states and EPA may face when implementing revisions to the CAFO regulations, and (3) determine the extent of U.S. Department of Agriculture's (USDA) involvement in developing the proposed revisions to EPA's regulations. To address the first and second objectives, we, among other things, surveyed all 10 EPA

² Although Oklahoma is authorized to implement other aspects of the permit program, it is not authorized to administer the CAFO program.

³ Alaska, Idaho, Massachusetts, New Hampshire, New Mexico, and Oklahoma are not currently authorized.

⁴ Natural Resources Defense Council and Public Citizen are nonprofit organizations that advocate for environmental and consumer protection, among other issues.

⁵ *Natural Resources Defense Council, Inc. v. Reilly*, Civ. No. 89-2980 (RCL) (D.D.C.), October 30, 1989.

⁶ Plaintiffs and EPA agreed to an initial settlement on January 31, 1992, which has been modified several times, to establish a schedule for EPA to propose and take final action on 18 point source categories, including CAFOs.

regional offices and interviewed EPA officials in four of the regions. These four regions oversee the 23 states that have an estimated 70 percent of large animal feeding operations that could be defined as CAFOs under the revised regulations. We also interviewed state officials in four states—Iowa, North Carolina, Pennsylvania, and Wisconsin—that have large numbers of confined poultry, swine, dairy, and beef cattle operations. To address the third objective, we interviewed agency officials, reviewed relevant documents, and observed meetings between the agencies. Appendix I contains further details of our scope and methodology.

Results in Brief

The CAFO program has had two major shortcomings. First, exemptions in EPA's regulations allowed an estimated 60 percent of animal feeding operations with more than 1,000 animal units to avoid regulation. Specifically, animal feeding operations that discharged waste into waterways only during a 25-year, 24-hour storm event—the amount of rainfall during a 24-hour period that occurs on average once every 25 years—or greater were not explicitly defined as CAFOs and did not require permits. Additionally, chicken operations with dry manure-handling systems were not generally required to obtain permits. Finally, animal wastes applied to crop and pastureland were generally not regulated under the CAFO program.

Second, EPA's limited oversight of the states has contributed to inadequate implementation by some authorized states. For example, our surveys show that 11 authorized states with over 1,000 large animal feeding operations do not issue discharge permits that contain all required elements. Three of these states have not issued any discharge permits to their operations, thereby leaving these facilities and their wastes essentially unregulated by the CAFO program. EPA officials acknowledge that they have historically paid little attention to the state CAFO programs because they gave higher priority to other sources of pollution, such as industrial and municipal waste treatment facilities, considered the major sources of water impairment. In addition, EPA officials stated that the agency's only leverage to compel states to implement the program with all federal requirements is to either withhold the grant funding for program operations or retract the state's authority to run the entire NPDES permit program—including the components that regulate industrial and municipal waste treatment facilities. EPA is reluctant to use these tools because it maintains that withholding grant funding would further hamper the states' ability to effectively implement their programs, and EPA does not have the resources to directly implement the entire permit program in additional states. However, EPA has recently devoted

more attention and resources to the CAFO program and, as a result, has had some limited success in persuading authorized states to improve their programs without resorting to these tools. For example, in 2002, EPA persuaded several states to begin to issue discharge permits that meet all EPA requirements.

EPA recently issued revisions to its regulations that would (1) eliminate the 25-year, 24-hour storm discharge exemption, (2) require chicken operations that use dry manure-handling systems to obtain permits, and (3) subject wastes applied to crop and pastureland under the control of the CAFO operator to permit requirements. Although the revised regulations address some of the key shortcomings of the program, they raise even greater management challenges for the states and EPA. By extending coverage to previously exempt animal feeding operations, we estimate that the revised regulations could increase the number of operations required to obtain permits by an estimated 7,000—from the about 4,500 permits currently issued to about 11,500. These changes, along with extending permit coverage to the application of animal waste to crop and pastureland controlled by the CAFO operator, will create a resource and administrative challenge for the states. Specifically, states will need to increase their efforts to identify, permit, and inspect CAFOs and take appropriate enforcement actions against those in noncompliance. For its part, EPA will need to increase its oversight of state programs to ensure that the new requirements are adopted and implemented. This oversight effort will be significant in light of the large number of animal feeding operations that will need permits under the revised regulations. However, neither EPA nor the states we reviewed have developed plans—including the identification of resource requirements—for carrying out their increased responsibilities. We are making recommendations to EPA designed to increase the probability that the new program will be effective.

EPA did not formally consult with USDA when developing the proposed CAFO regulations, but USDA was increasingly involved in developing the revised regulations. EPA published the proposed regulations in January 2001 without allowing sufficient time for USDA to fully assess the proposed revisions. In June 2001, to help address USDA's concerns, EPA and USDA established a collaborative interagency working group. USDA's role in the working group was to provide technical information that identified how the regulations might adversely affect the livestock industry and to suggest alternative approaches that would mitigate these effects, such as allowing states greater flexibility in regulating smaller animal

feeding operations. EPA and USDA officials said this arrangement has worked well.

To help ensure that the potential benefits of the CAFO program are realized, we are recommending that EPA develop and implement a comprehensive tactical plan that identifies how the agency will carry out its increased oversight responsibilities under the revised program. In addition, we are recommending that EPA work with authorized states to develop and implement their own plans that identify how they intend to carry out their increased permitting, inspection, and enforcement responsibilities within specified time frames.

We provided EPA and USDA with a draft of this report for review and comment. Both EPA and USDA provided technical comments that we incorporated into the report as appropriate. EPA and USDA agreed with our findings and recommendations. EPA provided written comments that are presented in appendix II; USDA provided oral comments.

Background

Discharge permits establish limits on the amounts and types of pollutants that can be released into waterways. Under the Clean Water Act, concentrated animal feeding operations that discharge pollutants to surface waters must obtain permits from EPA or authorized states. However, unlike municipal and most industrial facilities that are allowed to discharge some waste, concentrated animal feeding operations are required to construct and operate facilities that do not release any waste to surface waters, except in extraordinary circumstances.

Under EPA's prior regulations, animal feeding operations could be defined as CAFOs and require discharge permits if they, among other things

- had more than 1,000 animal units,
- had more than 300 animal units and either discharged through a man-made device into navigable waters or directly into waters of the United States that originate outside the facility, or
- were of any size but had been determined by EPA or the state permitting authority to contribute significantly to water pollution.

Under these regulations, a large animal feeding operation did not need a permit if it only discharged during a 25-year, 24-hour storm event—the amount of rainfall during a 24-hour period that occurs on average once every 25 years or more. In addition, the regulations did not generally require permits for chicken operations that use dry manure-handling

systems—that is, systems that do not use water to handle their waste. Further, animal wastes that were applied to crop and pastureland were generally not regulated.

EPA has authorized 44 states and the U.S. Virgin Islands to administer the discharge permit program for CAFOs. To become an authorized state, the state must have discharge permit requirements that are at least as stringent as the requirements imposed under the federal program and must contain several key provisions. These provisions include allowing for public participation in issuing permits; issuing permits that must be renewed every 5 years; including authority for EPA and authorized states to take enforcement action against those who violate permit conditions; and providing for public participation in the state enforcement process by either allowing the public to participate in any civil or administrative action or by providing assurance that the state will investigate citizen complaints. According to EPA, public participation in the permitting and enforcement process is critical because it allows the public to express its views on the proposed operations and to assist EPA and state authorities in ensuring that permitted operations remain in compliance.

Shortcomings in Regulatory Approach and Oversight Problems Have Limited Effectiveness of the CAFO Program

The CAFO program has had two major shortcomings that have led to inconsistent and inadequate implementation by the authorized states. These shortcomings include (1) exemptions in EPA’s regulations that have allowed as many as 60 percent of the largest animal feeding operations to avoid obtaining permits and (2) minimal oversight of state CAFO programs by EPA. Although EPA maintains that it has limited tools to compel states to properly implement the CAFO program, it recently has had limited success in persuading some authorized states to begin issuing discharge permits that include all program requirements.

Exemptions in EPA’s Rules Allowed Most Animal Feeding Operations to Avoid Regulation

Two exemptions in CAFO regulations have allowed large numbers of animal feeding operations to avoid obtaining discharge permits. However, EPA believes that many of these operations may degrade water quality. The first exemption allowed operations to avoid obtaining discharge permits if they discharge waste only during 25-year, 24-hour rainstorm events. However, based on its compliance and enforcement experience, EPA believes that many of the operations using this exemption should, in fact, have a discharge permit because they are likely discharging more frequently. For example, when EPA proposed changes to the CAFO regulations, it stated that operations using this exemption were not taking into consideration discharges that may occur as a result of overfilling the

waste storage facility, accidental spills, or improper land application of manure and wastewater. The second exemption allowed about 3,000 confined chicken operations that use dry manure-handling systems to avoid obtaining permits. EPA believes that chicken operations using dry manure-handling systems should obtain permits because EPA and state water quality assessments found that nutrients from confined chicken operations, similar to other large livestock operations, contaminate waters through improper storage, accidental spills, and land application.

As a result of these exemptions, we estimate that only about 40 percent (4,500 of 11,500) of confined animal feeding operations currently have discharge permits.⁷ In addition, EPA believes about 4,000 smaller animal feeding operations may threaten water quality and may also need to be permitted. According to EPA and state officials, these smaller operations are generally not permitted because federal and state programs have historically focused their limited resources dedicated to CAFOs on regulating only the largest operations.

EPA's Limited Oversight of States' CAFO Programs Has Contributed to Inconsistent and Inadequate Implementation

EPA's limited oversight of the states has contributed to inconsistent and inadequate implementation by the authorized states.⁸ In particular, our surveys show that 11 authorized states—with a total of more than 1,000 large animal feeding operations—do not properly issue discharge permits. Although eight of these states issue some type of permit to CAFOs, the permits do not meet all EPA requirements, such as including provisions for public participation in issuing permits. The remaining three states do not issue any type of permit to CAFOs, thereby leaving facilities and their wastes essentially unregulated. EPA officials believe that most large operations either discharge or have a potential to discharge animal waste to surface waters and should have discharge permits.

⁷ Since EPA and most states do not know precisely how many animal feeding operations should have discharge permits, USDA estimated the number of potential CAFOs based on livestock type and the number of animals on the farm from the 1997 Census of Agriculture. See USDA, *Profile of Farms with Livestock in the United States: A Statistical Summary* (Washington, D.C.: February 2002).

⁸ We did not evaluate how EPA administered the program in the states not authorized to implement the CAFO program because these states contained fewer than 5 percent of large CAFOs.

The two states that lead the nation in swine production illustrate how programs can meet some EPA permit requirements but not others. For example, while Iowa's permits for uncovered operations (see fig. 1) meet all program requirements, its permits for covered operations (see fig. 2) do not. Contrary to EPA requirements that permits are renewed every 5 years, Iowa issues these permits for indefinite periods of time. While North Carolina issues permits to both covered and uncovered animal feeding operations, these permits do not include all EPA requirements, such as provisions for public participation or allowing for EPA enforcement of the state permit.

Figure 1: Uncovered Operation



Source: USDA.

Figure 2: Covered Operation



Source: USDA.

Michigan and Wisconsin also illustrate how two authorized states with a similar number of animal feeding operations differ in program implementation. According to USDA estimates, both states have over 100 operations with more than 1,000 animal units that could be defined as CAFOs. While Wisconsin had issued 110 permits to these operations, Michigan had not issued any, according to our survey.⁹ As a result, waste discharges from facilities in Michigan remained unregulated under the CAFO program.

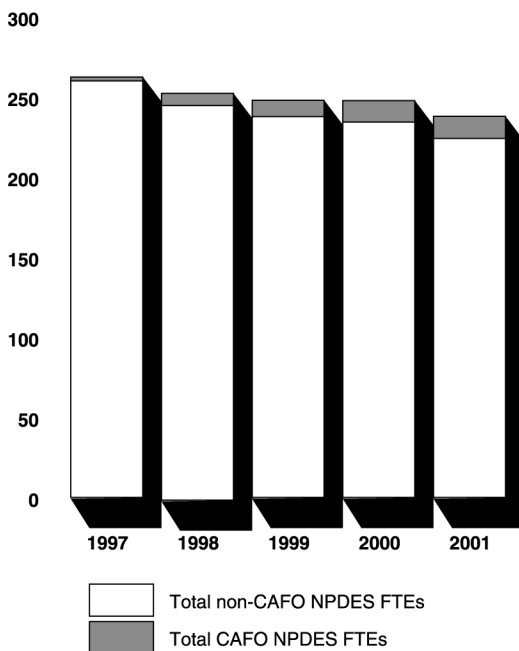
EPA officials acknowledged that until the mid-1990s the agency had placed little emphasis on and directed few resources to the CAFO program and that this inattention has contributed to inconsistent and inadequate implementation by authorized states. Instead, the agency gave higher priority and devoted greater resources to its permit program for the more traditional point sources of pollution—industrial and municipal waste

⁹ On December 13, 2002, Michigan established procedures for issuing CAFO discharge permits.

treatment facilities. However, as EPA's and the states' efforts have reduced pollution from these sources, concerns grew in the 1990s that the increasing number of large concentrated animal feeding operations could potentially threaten surface water quality. In response, EPA began placing more emphasis and directing more resources to the CAFO program. As a result, some states that had not previously issued discharge permits began to do so.

As shown in figure 3, EPA has historically assigned significantly more personnel resources to the industrial and municipal portions of the NPDES permit program. In the four regions we reviewed, the number of full-time equivalent positions dedicated to the CAFO program has increased since 1997—from 1 to 6 percent—but this increase has, for the most part, been at the expense of the industrial and municipal portions of the permit program. EPA officials told us that due to budget constraints, any increase in resources in one program area requires the reduction of resources in others.

Figure 3: EPA Full-Time Equivalent Positions Assigned to Its NPDES Permit Program in Four EPA Regions, 1997-2001



Source: GAO's analysis of EPA data.

In addition to resource constraints, EPA officials say that the agency has little leverage to compel states to issue permits with all required elements because the agency's primary recourses in such situations are to either (1) withhold grant funding it provides to states for program operations or (2) withdraw the states' authority to run the entire NPDES permit program, including the regulation of industrial and municipal waste treatment facilities. EPA has been reluctant to use these tools because it maintains that withholding grant funding would further weaken the states' ability to properly implement the program and EPA does not have the resources to directly implement the permit program in additional states. To date, EPA has never withheld grants or withdrawn a state's authority.

However, EPA has had limited success in persuading some authorized states to begin issuing discharge permits with all EPA requirements. For example, Michigan has been an authorized state since 1973, but only agreed in 2002 to begin issuing discharge permits. This agreement followed an EPA investigation that revealed several unpermitted CAFOs. Similarly, EPA recently persuaded Iowa to increase the issuance of discharge permits to uncovered feedlots. However, to date the agency has not been able to convince the state to issue permits to its covered operations, even though EPA believes these types of operations should also have permits. In 2002, EPA was also successful in persuading three other authorized states—Florida, North Carolina, and South Carolina—to begin issuing discharge permits that meet all program requirements.

EPA's Revised Regulations Offer Potential to Improve the CAFO Program, but States and EPA Will Face Implementation Challenges

According to our surveys of the regions and states, EPA's revised regulations—eliminating the 25-year, 24-hour storm exemption; explicitly including dry-manure chicken operations; and extending permit coverage to include the land application areas under the control of CAFO—address some key problems of the CAFO program. However, they will also increase EPA's oversight responsibility and require authorized states to increase their permitting, inspection, and enforcement activities. Furthermore, neither EPA nor the states have planned how they will face these challenges or implement the revised program.

Revisions Will Help Address Regulatory Problems by Requiring Potential Dischargers to Obtain Permits

EPA's decision to eliminate regulatory exemptions should strengthen the permit program because the revised regulations will extend coverage to more animal feeding operations that have the potential to contaminate waterways. As previously mentioned, the 25-year, 24-hour storm exemption has proven particularly problematic for EPA and the states because it allowed CAFO operators to bypass permitting altogether. By eliminating this exemption, we estimate that an additional 4,000 large animal feeding operations will require permits. According to our survey results, the elimination of this exemption could significantly improve the program. In addition, EPA's decision to also explicitly require permits for large dry-manure chicken operations will increase the number of permitted facilities by another 3,000. Lastly, CAFO operators are, for the first time, required to either (1) apply for a permit or (2) provide evidence to demonstrate that they have no potential to discharge to surface waters.

In addition to eliminating regulatory exemptions, EPA also extended permit coverage to include the application of animal waste to crop and pastureland controlled by the CAFO. Specifically, CAFO operators who apply manure to their land will be required to develop and implement nutrient management plans that, among other things, specify how much manure can be applied to crop and pastureland to minimize potential adverse effects on the environment. CAFO operators will need to maintain the plan on site and, upon request, make it available to the state permit authority for review.

Authorized States Will Face Challenges Implementing the Revised Regulations

Although EPA believes that the revised regulations will improve the CAFO program, the changes will create resource and administrative challenges for the authorized states. We estimate that the revised regulations could increase the number of operations required to obtain permits by an estimated 7,000—from about 4,500 permits currently issued, to about 11,500. States will therefore need to increase their efforts to identify, permit, and inspect animal feeding operations and, most likely, will have to increase their enforcement actions. However, many states have not yet identified and permitted CAFOs that EPA believes should already have been covered by the CAFO program. Therefore, increased permitting requirements could prove to be a daunting task. For example, Iowa has only permitted 32 operations out of more than 1,000 of its animal feeding operations that have more than 1,000 animal units. Furthermore, states may need to identify and permit an estimated 4,000 operations with fewer than 1,000 animal units that EPA believes may be discharging. Finally, when states inspect CAFOs, they will need to determine if the operation's nutrient management plan is being properly implemented.

According to state officials, meeting these demands will require additional personnel. However, most of the states we visited cannot hire additional staff and would have to redeploy personnel from other programs. For example, Iowa and North Carolina, two states with a large number of potential CAFOs, each have less than one full-time employee working in the CAFO program.

EPA's Oversight of States Will Need to Increase

While the burden of implementing the revised regulations will fall primarily on the states, EPA will need to increase its oversight of state programs to ensure that the states properly adopt and implement the new requirements. This oversight effort will be especially important in light of the large number of animal feeding operations that will need permits under the revised regulations. Although most of the regions have not determined precisely what additional resources they will need to adequately carry out their increased responsibilities, EPA officials told us that, like the states, they will have to redeploy resources from other programs.

EPA and States Have Not Prepared for Additional Responsibilities

Despite the challenges that EPA and the states will face in implementing the revised CAFO program, they have not yet prepared for their additional responsibilities. According to our survey of 10 EPA regions, the regions and states have not estimated the resources they will need to implement the revised CAFO program. EPA, for its part, has not developed a plan for how it intends to carry out its increased oversight responsibilities under the revised regulations, such as ensuring that authorized states properly permit and inspect CAFOs and take appropriate enforcement action. EPA and state officials told us they intend to wait until the revised regulations are issued before they begin planning for their implementation.

USDA's Role in Developing Revised Regulations Increased Over Time

EPA did not formally consult with USDA when it was developing the proposed CAFO regulations published in January 2001, but the department has played a greater role in providing input for the revised regulations. EPA and USDA developed a joint animal feeding operation strategy in 1998 to address the adverse environmental and public health effects of animal feeding operations. However, USDA's involvement in developing the proposed CAFO regulations was generally limited to responding to EPA requests for data. USDA officials told us that they were asked to provide substantive comments only after the Office of Management and Budget suggested that EPA solicit USDA's views. However, USDA officials maintained that they did not have sufficient time to fully assess the

proposed regulations and discuss its concerns with EPA before the proposed regulations were published in January 2001.

In June 2001, to address USDA concerns, EPA and USDA established an interagency workgroup on the proposed revisions to the CAFO regulations. Under this arrangement, USDA provided technical information that identified how the proposed regulations could adversely affect the livestock industry and suggested alternative approaches that would mitigate these effects. For example, through this interagency workgroup, USDA suggested that EPA consider allowing states greater flexibility in regulating smaller operations. USDA also raised concerns that EPA's proposed nutrient management plan was not entirely consistent with USDA's existing comprehensive nutrient management plan and would be confusing to operators. EPA agreed to take these concerns into consideration when it prepared the final revisions to the regulations.

In July 2001, to further strengthen the cooperative process, EPA and USDA developed Principles of Collaboration to ensure that the perspectives of both organizations are realized. In essence, the principles recognize that USDA and EPA have clear and distinct missions, authorities, and expertise, yet can work in partnership on issues of mutual concern. To ensure that both EPA and USDA work together constructively, the principles call for EPA and USDA to establish mutually agreeable time frames for joint efforts and provide adequate opportunities to review and comment on materials developed in collaboration prior to public release. According to USDA and EPA officials, this new arrangement has improved the agencies' working relationship.

Conclusions

Although EPA has historically given the CAFO program relatively low priority, it has recently placed greater attention on it as a result of the 1989 lawsuit and the growing recognition of animal feeding operations' contributions to water quality impairment. The implementation of the CAFO program has been uneven because of regulatory exemptions and the lower priority EPA and the states have assigned to it. Although EPA has had some recent success in persuading states to begin issuing discharge permits that include all program requirements, agency officials say that their ability to compel states to do so is limited. While the revised regulations will help address the regulatory problems, they will also increase states' burdens for permitting, inspecting, and taking enforcement actions. Because several states have yet to fully implement the previous, more limited, program, EPA will need to increase its oversight of state programs in order to ensure that the new requirements are properly

adopted and carried out by the states. EPA and the states have not identified what they will need to do—or the required resources—to carry out these increased responsibilities. For example, they have not determined how they intend to accomplish their expanded roles and responsibilities within current staff levels.

Recommendations for Executive Action

To help ensure that the potential benefits of the revised CAFO program are realized, we recommend that the Administrator, EPA,

- develop and implement a comprehensive tactical plan that identifies how the agency will carry out its increased oversight responsibilities under the revised program. Specifically, this plan should address what steps the agency will take to ensure that authorized states are properly permitting and inspecting CAFOs and taking appropriate enforcement actions against those in noncompliance. In addition, the plan should identify what, if any, additional resources will be needed to carry out the plan and how these resources will be obtained; and
- work with authorized states to develop and implement their own plans that identify how they intend to carry out their increased permitting, inspection, and enforcement responsibilities within specified time frames. These plans should also address what, if any, additional resources will be needed to properly implement the program and how these resources will be obtained.

Agency Comments

We provided EPA and USDA with a draft of this report for review and comment. The Director of Animal Husbandry and Clean Water Programs, along with other USDA officials, provided oral comments for USDA. EPA provided written comments. Both agencies expressed agreement with the findings and recommendations in the report. EPA and USDA also provided technical comments that we incorporated into the report as appropriate. EPA's written comments are presented in appendix II.

We are sending copies of this report to the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, appropriate congressional committees, and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please call me at (202) 512-3841. Key contributors to this report are listed in appendix III.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Lawrence J. Dyckman". The signature is written in a cursive style with a large, prominent initial "L".

Lawrence J. Dyckman
Director, Natural Resources
and Environment

Appendix I: Scope and Methodology

To determine the problems EPA faced in administering the CAFO program and the potential challenges the states and EPA may face when implementing revisions to its CAFO regulations, we surveyed all 10 EPA regional offices. Our survey asked regional officials to provide information on program management and oversight of authorized states' CAFO programs, resources dedicated to the program, problems EPA has faced administering the program, and the potential challenges the states and EPA might face in implementing revisions to the CAFO program.

In addition, we interviewed EPA officials in 4 of the 10 regions. We judgmentally selected the 4 regions that represent 23 states with an estimated 70 percent of large animal feeding operations that could be designated as CAFOs under the revised regulations. Because EPA and most states do not know precisely how many animal feeding operations should have discharge permits, we used USDA's estimate of the number of potential CAFOs based on livestock type and the number of animals on the farm from the 1997 Census of Agriculture. These regions and their represented states are

- Region 3—Philadelphia: Delaware, Maryland, Pennsylvania, Virginia, and West Virginia;
- Region 4—Atlanta: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee;
- Region 5—Chicago: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; and
- Region 7—Kansas City: Iowa, Kansas, Missouri, and Nebraska.

To determine how the 44 authorized states and the U.S. Virgin Islands administer the program and to obtain their views on the challenges they might encounter in implementing the revised regulations, we interviewed program officials in four authorized states—Iowa, North Carolina, Pennsylvania, and Wisconsin. We judgmentally selected these states from among the four regions we visited because they have large numbers of confined poultry, swine, and dairy and beef cattle operations. We did not evaluate how EPA directly administers the program in the states and territories not authorized to implement the CAFO program because these states contained less than 5 percent of large CAFOs. EPA administers the program directly because these states have not asked for authority to administer the program.

To examine the extent of USDA's involvement in developing the proposed revisions to EPA's CAFO regulations, we interviewed officials in USDA's Natural Resources Conservation Service and EPA. We also observed an EPA and USDA Working Group Meeting on Concentrated Animal Feeding Operations.

We conducted our review from January 2002 through October 2002 in accordance with generally accepted government auditing standards.

Appendix II: Comments from the Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 10 2003

OFFICE OF
WATER

Mr. Lawrence J. Dyckman
Director
Natural Resources and Environment
U. S. General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Dyckman:

Thank you for allowing the U. S. Environmental Protection Agency (EPA) an opportunity to review and comment on the draft of your report entitled, *Livestock Agriculture: Increased EPA Oversight Will Improve Environmental Program for Concentration Animal Feeding Operations* (GAO-03-285). We understand that our technical edits and suggestions will be addressed in the final report.

In general, I believe that this report gives a good overview of the implementation of the Concentrated Animal Feeding Operation (CAFO) program under the old CAFO rule promulgated in the mid-1970s. We recognize that the CAFO program was hampered, in part by the outdated regulations and by incomplete attention by EPA and the States. In the past two years, however, EPA has seen substantial improvement in several State CAFO programs and a near doubling of the number of CAFOs permitted under the Clean Water Act permitting program.

EPA Administrator, Christine Todd Whitman signed the revised final CAFO rule on December 15, 2002. The new rule addresses many of the concerns with the CAFO program at the state and federal level that are identified in this report. The new rule strengthens the CAFO program in several important ways. The rule removes the permit exemptions for CAFOs that discharge during large storm events and for large chicken operations with dry manure handling systems. These improvements in the regulation will require large operations to apply for a National Pollutant Discharge Elimination System (NPDES) permit. This revision will also remove any ambiguity regarding requirements for States to issue NPDES permits to CAFOs. The final rule also explicitly requires CAFOs to address the land application of their manure and wastewater by developing and implementing nutrient management plans.

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We appreciate the acknowledgment of the close working relationship that existed between EPA and the U.S. Department of Agriculture during the development of the final rule. This highly constructive interaction has served as a springboard for several collaborative discussions on a broad range of environmental and agricultural topics.

EPA generally agrees with the recommendations in this report. I am committed to the development and implementation of a comprehensive national plan that ensures that the new regulations are aggressively implemented. I will work closely with the EPA regions to ensure that each of the States implement and enforce the final regulations, including revisions to their current State NPDES programs, as needed.

I would like to pass along my regards to your evaluation team that performed this review. My staff enjoyed working with your team of Greg Kosarin, John Smith, Paul Pansini, and Mary Denigan.

If you have questions about our comments, please call me or have your staff call Jeff Lape, Chief of the Rural Branch at (202) 564-0712.

Sincerely,



G. Tracy Mehan,
Assistant Administrator

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Greg Kosarin, (202) 512-6526

Acknowledgments

In addition to the individual named above, Mary Denigan-Macauley, Oliver Easterwood, Lynn Musser, Paul Pansini, and John C. Smith made key contributions to this report.

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