



## COVER STORY

# Down On The Factory Farm

*Concentrated animal feeding operations are point sources that have largely escaped regulation. Workers, nearby communities, streams and lakes, and even downwind regions are being affected by water and air pollution caused by billions of gallons of untreated waste each year. Meanwhile, the Bush administration has weakened the Clean Water Act's rules governing CAFOs and may give the industry a virtual carte blanche safe harbor to avoid liability under the Clean Air Act and Superfund*

PAT GALLAGHER and BARCLAY ROGERS

**M**r. and Mrs. Rural America are hopping mad. 30,000 pigs have moved in across the way, and there's not much they can do about it. Or maybe it's 2 million laying hens, or 25,000 dairy cows, or 50,000 head of beef. Such is the scale of modern factory farming. From the Central Valley of California to the high plains of Oklahoma to the coastal lowlands of North Carolina, the industrialization of meat, milk, and egg production continues to push rural America to the breaking point. And despite the industry's claim that modernization ensures a safe and steady food supply, warning signs have arisen at the supermarket and in hospitals. *Consumer Reports* recently announced that nearly half of all chicken it tested contained potentially deadly bacteria, 90 percent antibiotic-resistant. And the World Health Organization recently called for a ban on the use of antibiotics in livestock feed.

We used to just call them feedlots, but now they carry a high-tech name — concentrated animal feeding operations. CAFOs have been around for decades, and have always carried an undesirable environmental reputation. But their place in rural America has expanded in recent decades from isolated annoyance to a national nightmare.

The classic case of *Spur Industries v. Del Webb Development Co.* is presented to first-year law students as an example of the conflict between the noxious effects of feedlots and the rights of newly settled city-folk to enjoy their land. There is a tradition of favoring the farmer when a city dweller "comes to the nuisance." But the roles are now reversed. Established rural families have been driven to the brink by the arrival of new

CAFOs, which are often controlled by absentee corporate owners.

In issuing a nuisance verdict against a CAFO, an Alabama state judge recently made this point loud and clear: "The plaintiffs are not hypersensitive city dwellers complaining of a minor annoyance. They are a group of hardy, hard working, self-sufficient, independent, reasonable, and fair-minded men and women who expect to be treated just as they would treat others." In another case from Ohio, the trial judge concluded, "While odors from normal rural conditions could be expected, they should not to such excessive abuse as to destroy the ability to live and enjoy the home, or such as to reduce the value of the residential property."

The CAFO industry relies unabashedly on economies of scale, which it says allows it to furnish food to consumers of superior quality at the lowest prices. It prides itself on sound business practices, high productivity, and uniform supermarket products through consistent genetics. But the external costs of this productivity have not been lost on the public: not on the neighbors who have won some of the largest nuisance verdicts in history; nor on the environmental community; nor on large-scale customers such as McDonald's, who have now begun to demand products free of the antibiotics needed to protect livestock from the stresses of being grown in an over-confined environment.

Given all of these deleterious effects, one would think that CAFOs would be subject to the same kind of regulation as other polluters and businesses that have harmed public health and the environment. After all, the appellation "factory farming" is no misnomer. Sadly, our environmental laws are so riddled with loopholes or undermined by lax

enforcement that they have proven ineffective in protecting rural America from industrialized livestock. And while state and local regulators have often forged ahead imaginatively to solve problems with the statutory and regulatory tools they have at hand, the Bush administration has done the opposite, weakening the limited controls that currently exist.

In December 2002, the Bush EPA gutted the most basic protection against CAFO pollution, the Clean Water Act requirement that CAFOs not discharge raw wastes into rivers and lakes. In its newly promulgated regulations, the agency took a step backward by eliminating a blanket prohibition against waste discharges from CAFOs that had been in effect since the 1970s. In the place of the discharge prohibition, EPA granted CAFOs a license to pollute as long as they follow a "nutrient management plan." However, this plan, which is the linchpin in the regulatory regime, is written by the CAFO operator without any government oversight and is not required to undergo public review. A broad coalition of environmental groups, including the Sierra Club, is in litigation right now challenging the validity of these regulations.

The Clean Water Act is not the only environmental safeguard the Bush team has sought to undermine. EPA is engaged in private negotiations with the CAFO industry to weaken the Clean Air Act and Comprehensive Environmental Response, Compensation, and Liability Act, as these laws apply to CAFOs. The agency is considering providing CAFOs an industry-wide safe harbor from prosecution under these laws in exchange for a commitment from some of the operations to participate in a monitoring program. Under the safe harbor agreement, every CAFO seeking protection could acquire amnesty but less than one percent of the operations would actually be monitored. Environmental benefits of the agreement would be virtually nonexistent as it would not require CAFOs to reduce discharges or emissions or even to obtain a permit at the end of the monitoring period.

*EPA's new CAFO rules shut the public out of the process and ensure that vast quantities of waste will flow unabated into streams and lakes*

The Bush administration's program to weaken regulatory requirements comes in the face of growing awareness of the environmental impacts of industrialized meat, dairy, and egg production. CAFOs generate roughly 1 billion pounds of waste per year, approximately 1,000 pounds per American. But unlike municipal sewage plants, which Congress dealt with relatively swiftly after the Clean Water Act was passed in 1972, CAFOs remain largely unregulated and dump billions of gallons of raw animal waste onto fields, where it runs off into nearby lakes and rivers and percolates into drinking water. Pollution from CAFOs in many parts of the country is the rule, not the exception. As Steve Vauhan, a local official in Huron County, Michigan, explains, "The chances of keeping [the raw animal waste] out of Lake Huron through runoff are next to impossible.

This drain system we have is very efficient — a drop of rain falls and 20 minutes later it's in Lake Huron."

Widespread fish kills have become commonplace in areas of the concentrated industrialized livestock production. In North Carolina, for instance, where in the years 1990 to 2002 the number of hog farms dropped by 90 percent, a new breed of facility came to the state. The number of hogs confined at an average facility increased from less than 500 to over 3,000, and the industrialized CAFO seized control of the market.

In the corresponding years, manure spills killed tens of millions of fish and subtle shifts in aquatic ecosystems imperiled millions more. A single manure spill poured 25 million gallons of hog waste into the New River, killing over 10 million fish and closing more than 360,000 acres of the state's coastal wetlands to shell fishing.

North Carolina is by no means alone: in recent years Iowa, Ohio, Minnesota, Missouri, and Wisconsin have suffered horrendous fish kills associated with livestock pollution. Millions of fish mortalities have been attributed to spills from CAFOs. In one recent incident, outraged Wisconsin residents went to court after a CAFO spill contami-

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## A N O T H E R V I E W

## Large Pollution Reductions, From More Operations

**E**PA's new Clean Water Act regulations for Concentrated Animal Feeding Operations will ensure that the nation's largest livestock and poultry operations properly manage runoff from their animal manure or litter to protect water quality. The rules replaced regulations that were over 25 years old that did not establish adequate expectations for environmental performance. The new rules will prevent billions of pounds of pollutants from entering America's waters every year.

The rules will lead to an annual reduction of over 56 million pounds of phosphorus released from CAFOs and over 110 million pounds of nitrogen. Sediment reductions will total 2 billion pounds, metals 911,000 pounds, and there will be significant reductions in pathogens.

For the first time, all of the nation's large CAFOs, including beef, dairy, horse, swine, and poultry operations, are required to apply for National Pollutant Discharge Elimination System permits. As many as 15,000 livestock operations will be required to seek permits regardless of whether they discharge only during large storms. Less than 5,000 are currently covered by NPDES.

Management practices required by the rule will maximize the use of manure as a resource for agriculture while reducing impacts on the environment. The rule requires that CAFOs develop site-specific nutrient management plans to address all aspects of effective manure management by large operations, including land application.

The rule will also significantly improve accountability to members of the public that CAFOs are effectively managing manure and protecting water quality. It provides that NPDES permits written by EPA and the states require CAFOs to submit "annual reports" that summarize key information regarding facility implementation and report any dis-

charges that occur. These reports will be available to the public upon request.

EPA has moved quickly and effectively to implement the rules, meeting with state environmental and agriculture agencies. EPA has also met with major constituency groups to discuss their content and implementation. The agency is working with states to review and modify their permit programs, including nutrient management standards, and we are developing guidance documents and training permit writers and inspectors.



**Linda Y. Boornazian**

The Department of Agriculture has been working in cooperation with EPA to communicate expectations to farmers. In a statement issued with the regulations, Secretary Anne Veneman said, "The new rule is unique in that it comes after unprecedented cooperation between EPA and USDA to find a way to help producers meet their own and society's goals for environmental quality and profitability. USDA stands ready to provide assistance in an incentive-based approach combining information and education, research and technology transfer, direct technical assistance and financial assistance through the Environmental Quality Incentives Program (EQIP) and other farm bill programs."

While EPA and state environmental agencies will issue new permits, USDA and state conservation agencies can provide funding and technical assistance to owners and operators. Moreover, while EPA's rules address primarily the largest operations, they are designed to complement state programs for smaller operations.

The CAFO rule establishes appropriate flexibility for the states to tailor requirements to the varying conditions (e.g., climatic conditions, water quality needs) that exist in each state. EPA is also promoting state and local watershed-based efforts including national watershed pilot ef-

forts, water quality trading, watershed-based permitting, and other approaches that provide states and communities with the tools and abilities to target their efforts to improve water quality.

EPA will provide financial support from Clean Water Act programs, and USDA from the EQIP and other programs to support environmental stewardship efforts by livestock and poultry producers. To help these operations meet their conservation needs, including related CAFO rule requirements, Congress increased funding for EQIP in the 2002 Farm Bill. New technology is also being developed and demonstrated to aid farmers in meeting the stewardship objectives of the new CAFO rule.

Finally, EPA recognizes the power of American ingenuity to develop new technologies to solve today's problems. While manure is a valuable resource when used properly for agricultural purposes, there are areas of the country where there is simply too much manure for the available land. EPA is encouraging livestock and poultry producers to move forward with development of new technology for manure management, such as for use as a feedstock for compost and fertilizer and for energy generation.

The new CAFO regulations provide for better environmental protection from process wastewater and runoff associated with large concentrated animal feeding operations. Even though it is a revision to an old rule, the new rule includes many firsts. Nutrient management plans are now required; all operations must submit annual reports to the permitting authority with important information on plan implementation; dry poultry operations are brought under the fold; and all large CAFOs have to apply for NPDES permits whether or not they discharge only in large storms. These firsts significantly increase the breadth of environmental protection afforded by the new rule.

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nated one of the state's prized trout streams.

Fish kills may be just the tip of the iceberg. According to a growing body of science, CAFOs have also helped spawn *Pfiesteria piscicida*, the "cell from hell." *Pfiesteria* is a single-celled organism that feeds off living tissues, creating open sores on humans and fish exposed to its debilitating toxins. The parasite eats its prey alive by devouring it through the open sores. *Pfiesteria* has been implicated in fish kills up and down the East Coast, especially in the coastal waters of North Carolina and the Chesapeake Bay, downstream from major industrialized meat, poultry, and egg production areas. In addition to killing fish, *Pfiesteria* directly affects human health. Humans exposed to it also suffer open sores and may experience memory loss, confusion, headaches, blurred vision, nausea, impaired breathing, and liver and kidney problems.

Catastrophic manure spills certainly wreak havoc on rivers and streams, imperiling fish and endangering humans. But the chronic problem of manure runoff presents perhaps a larger environmental threat. CAFOs frequently apply manure to nearby fields, where it mixes with rainwater and runs off into local rivers and streams. The nutrient-rich manure runoff alters the chemical composition of receiving waters, and triggers a surge in algae and other aquatic vegetative growth. The increase is no small problem: EPA maintains that "over-enrichment of waters by nutrients (nitrogen and phosphorous) is the biggest overall source of impairment of the nation's rivers and streams, lakes and reservoirs, and estuaries." The city of Tulsa, Oklahoma, recently settled a lawsuit against several large poultry companies for polluting its drinking water supply with phosphorous-laden waste.

**T**he Clean Water Act is the primary tool to address manure runoff and accompanying environmental problems, but it often proves an unwieldy instrument to get to the heart of the problem. The steady leaching of

pollutants from the fields into nearby surface waters can be difficult to detect. While the impacts of this persistent pollution are undeniable, pursuing an enforcement action without evidence of major manure spills is a risky proposition. And, as detailed below, EPA's new regulations will make it even more difficult to prosecute CAFOs under the CWA.

CAFOs also foul underground drinking water supplies. They typically store raw animal waste in open pits, which leak untold quantities of contaminants into underlying aquifers. Nitrate contamination is a significant problem in concentrated livestock production areas. The Chino Basin in southern California presents a textbook case of an entire aquifer fouled by CAFOs, in this case concentrated dairy feedlots. Another recent study by the U.S. Geological Survey in Okla-

homa found widespread evidence of groundwater contamination from animal waste, in a state packed with concentrated hog feedlots. And in another study, the Centers for Disease Control documented nitrate contamination in 13 percent of surveyed drinking water wells in the Midwest and reported that the likelihood of groundwater contamination doubled if manure had been applied near the wellhead.

Groundwater contaminated with nitrates can cause significant human health problems, especially in young children,

the elderly, and people with suppressed immune syndromes. For instance, infants who drink nitrate-contaminated water may be at risk of methemoglobinemia, or "blue baby" syndrome, which can impair development. In recent years, EPA has ordered CAFOs to supply bottled water to residents with drinking water contaminated by nitrates.

Relief for groundwater contamination can be obtained under the Resource Conservation and Recovery Act, but given the structure of the regulations, enforcement is difficult. Under RCRA, Congress sought to severely limit land disposal of solid wastes in 1976. However, to prove that a CAFO is violating the "open dump" prohibition in the statute, one must first establish that the op-

*The Clean Air Act and CERCLA could be used to control air pollution from CAFOs. But EPA is striking a deal that will severely undercut these laws*

## A N O T H E R V I E W

**Greater Scope, Reductions Through Cooperation**

In 1999, when U.S. EPA and the Department of Agriculture released their strategy requiring a significant increase in regulation of Concentrated Animal Feeding Operations by NPDES-delegated states, the Utah Department of Environmental Quality was faced with a real problem. How could a small state, with limited resources, possibly meet the expanded requirements of this new federal program to address the problem of water pollution from animal feeding operations? We knew that a command-and-control approach wouldn't work; Western farmers are far too independent to willingly comply with edicts from faceless bureaucrats. Besides, the challenge of attempting to identify a handful of existing CAFOs from among thousands of animal feeding operations was a logistical nightmare.

Rather than wait for further direction from EPA, the Division of Water Quality decided to take a proactive approach and formed the Utah CAFO Committee to develop a state strategy to deal with the pollution problem. The Utah CAFO Committee is made up of representatives from all of the major agricultural advocacy and assistance organizations within the state including, among others, the Utah Farm Bureau, Utah Association of Conservation Districts, local soil conservation districts, Natural Resources Conservation Service, Utah State University Extension, Utah Department of Agriculture and Food, and numerous livestock production groups. By bringing representatives of the agricultural sector to the same table with regulatory officials, this unique committee moved forward with the common goal of improving water quality while maintaining the viability of the state's agricultural industry. The result of the partnership is the Utah Strategy to Address Water Pollution from Animal Feeding Operations.

**Don A. Ostler**

An ambitious goal of the Utah Strategy was to inspect every animal feeding operation in the state, regardless of size. But, rather than relying on DEQ's Division of Water Quality to do the assessments, which would have taken years, draining state resources and creating confrontational situations with farmers, the committee decided to

enlist conservation district members and producer group representatives to conduct assessments.

We trained a pool of individuals in our partnership who volunteered to identify problems at animal feeding operations and to in-

struct farmers about the new requirements and technical and financial assistance options. This plan accelerated the pace of inspections and took advantage of the existing relationships that the farmers had with conservation district officials and livestock producer groups, increasing the cooperation level of the farmers in the assessment process. Through this partnership, the resources for the Utah Strategy's vision of universal assessment have increased 100-fold. In addition, the involvement of agricultural assistance personnel has avoided the need for DEQ to take the role of agricultural expert, instead relying on the knowledge and technical abilities of the partners.

Utilizing this partnership, Utah has been able to move quickly to identify problems at animal feeding operations that may not have been found for a decade. The first assessments were conducted in November of 2000 and were substantially completed by May 2003, with nearly 3,000 operations assessed.

The Utah Strategy also created a new classification for animal feeding operations: "Potential CAFOs" are animal feeding operations that feed the equivalent of 1-999 beef cattle and have water pollution problems. According to federal regulations, these

operations would be considered Small and Medium CAFOs and could be required by designation or definition as a CAFO to apply for NPDES permits immediately. However, as an incentive, the Utah strategy allows a window of time for this group to voluntarily correct problems and thereby avoid a permit. This also allows them to qualify for funding which would not be available if they were immediately permitted as CAFOs. Potential CAFOs are allowed up to two years to plan, design, and finance needed improvements and three years to complete construction. While DEQ monitors them, operations must demonstrate continued progress during this voluntary compliance period to avoid permitting and enforcement actions.

The Utah Strategy will also result in cleaner water than can be achieved through strict implementation of the new rules. Federal regulations focus on Medium and Large CAFOs, only requiring changes at smaller operations when it is determined the operation has a significant impact on Waters of the United States. The Utah Strategy requires correction of problems at *all* operations, regardless of size.

There is no question that by implementing the Strategy, Utah is far ahead of where we would be. The partnership accomplished an incredible amount of work in identifying animal feeding operations, gaining the cooperation of farmers, and beginning to correct water quality problems at farms. Our agricultural producers have also positioned themselves to comply quickly with EPA's new rules. Through this partnership, technical and financial assistance will be targeted to those operations needing to correct problems. Large CAFOs have all been located and permitted. And the problem we had at the beginning? In forcing innovation, it has left us with a new dynamic in environmental protection for the future.

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eration has contaminated groundwater or violated another environmental constraint. While plenty of evidence exists to implicate CAFOs in areas of extensive groundwater contamination, establishing the link for enforcement purposes is no easy task.

As if water pollution were not enough, CAFOs also produce staggering quantities of dangerous air pollutants, affecting workers in the facilities, neighbors, and the environment. Hydrogen sulfide, which reeks like rotten eggs, is probably the most significant threat to livestock workers and downwind neighbors. Hydrogen sulfide levels inside CAFO confinement buildings often exceed dangerous thresholds, occasionally reaching lethal doses. In Minnesota, for example, seven people have died since 1992 from exposure to hydrogen sulfide released when manure pits were emptied. Even at sub-lethal levels, hydrogen sulfide causes workers to suffer extreme eye irritation, massive headaches, severe coughing, substantial breathing problems, and vomiting. Hydrogen sulfide emissions also harm downwind neighbors. Measurements beyond the CAFO property line often exceed human safety levels, and neighbors display symptoms identical to those experienced by sickened livestock workers.

CAFOs are a major source of ammonia gas emissions. Decomposing animal waste generates ammonia, which causes respiratory problems in humans exposed to the gaseous emissions. Livestock workers are exposed to elevated ammonia levels that cause respiratory ailments and eye irritation. Ammonia is also a precursor to oxides of nitrogen, one of the principal components of smog. Emissions from dairy feedlots near Los Angeles have proved to be a challenge in that region's effort to clean up the air.

CAFOs also generate vast amounts of small particles that can impair visibility and make the air unsafe to breathe. The particles lodge in workers' and neighbors' lungs, where they can trigger respiratory irritation, decrease lung capacity, and even lead to premature death. Particulate pol-

lution has been linked to increased hospital admissions and emergency room visits. Particulate pollution also is a leading cause of haze and reduced visibility and is partly to blame for the roughly 70 percent loss in visibility in many parts of the western United States, where the current range of visibility is 33-90 miles, down from a natural visibility of 140 miles.

The Clean Air Act and CERCLA could be used to control air pollution from CAFOs. But the Bush EPA is working behind the scenes to strike a deal with the CAFO industry that will severely undercut these laws. Under the safe harbor proposal, CAFOs would be excused from the permitting requirements of the Clean Air Act and would be shielded from obligations to report toxic releases under CERCLA. A safe harbor agreement would perpetuate the devastating effects of CAFO air pollution because it would eliminate any incentive for them to reduce emissions.

*Under the safe harbor agreement, every CAFO seeking protection could acquire amnesty but less than one percent would be monitored*

**A** crucial myth propagated by the industry lies at the heart of the CAFO pollution problem: that CAFO waste is simply a useful by-product of normal farming activities and, just like the cow pies of old, should simply be returned to the soil as a natural fertilizer. This concept may

work when the manure comes from a few hundred animals grazing on ample pasture. But it has little relevance in the context of massively concentrated feedlot operations, where tens of thousands of animals are confined in steel buildings and generate multi-million-gallon waste streams. Just like other industrial manufacturers, CAFO operators are in the business of producing products, not waste. Thus, their animal production needs dominate their decisions, not concerns about their waste products. The prevalence of fish kills and groundwater contamination associated with the industry highlights the fundamental flaws of the industry's myth. Even the Department of Agriculture acknowledges that the production of manure

## ANOTHER VIEW

## Regs Exceed Authority; Why Not Cooperative Approach?

The differing approaches to natural resource protection, through conservation or regulation, are increasingly affecting America's farmers. The conservation title in the 2002 farm bill builds upon past conservation gains and responds to the call of farmers and ranchers for additional resources in order to cope with current and future expanded government regulatory programs.

But EPA's Concentrated Animal Feeding Operations regulation has caused great concern throughout the agricultural community, in part because the regulation blurs the clear statutory distinction between the

discharge of pollutants from a point source and nonpoint source pollution resulting from, among other things, the day-to-day agricultural activities of farmers and ranchers.

The regulation also adds another layer to existing state permitting schemes that address CAFOs. Early in the regulatory process, EPA documented that there were 2,238 livestock facilities with National Pollutant Discharge Elimination System permits. They also documented that states, over and above the federal requirements, had already issued 41,601 permits to livestock facilities.

Complying with new NPDES regulations will be costly for many producers. This additional cost of production will stress our current farm structure and force the transition to larger operations. The estimates to implement EPA's new permit conditions range from \$100,000 for smaller CAFOs to well over \$1 million for larger CAFOs.

A key objection to the new rule is that EPA has exceeded its authority under the Clean Water Act to regulate CAFO operations by requiring all owners or operators to apply for an NPDES permit based on an arbitrary determination of "potential" to discharge, regardless of whether it actually discharges. The new regulation maintains that all CAFOs have a

"duty to apply" for a permit unless they obtain a site-specific exemption after proving "with a high degree of certainty" that they have no potential to discharge.

The new rules also expressly assert regulatory authority over certain discharges from CAFO land application areas. The rule provides that "the discharge of manure, litter, or process wastewater to waters of the United States from a CAFO as a result of [land application] by the CAFO to land areas under its control is a discharge . . . subject to NPDES permit requirements, except where it is an agricultural stormwater discharge."

The rule then provides that any such discharge is an exempt "agricultural stormwater discharge" where the land application has been "in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients."

But a CAFO does not include fields in which animals are not concentrated and where there is no feeding. EPA also lacks authority under the CWA to expand the definition of a CAFO to apply the NPDES program to nonpoint activities or to agricultural stormwater discharges. Congress, without qualification, exempted agricultural stormwater discharges from regulation by the NPDES program.

These regulations are not as bad as they could have been primarily because the final rule and effluent guidelines represent a much more narrow and targeted approach than any of EPA's initial proposals. Nevertheless, the new regulations provide for the development of open-ended requirements and conditions that will ultimately lead to burdensome, costly compliance.

So what is the alternative approach to improving water quality and other overall environmental protection in agriculture? The Farm Security and Rural Investment Act of 2002, the farm bill, supported large

funding increases in conservation programs to assist farms of all sizes in improving water quality. Eighty-five percent of the \$17 billion in additional conservation funding over the five-year authorization will be spent to address the soil, water, and air impacts of farming.

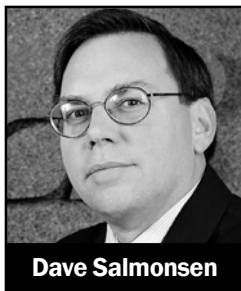
The Environmental Quality Incentives Program provides technical and financial assistance to landowners to improve soil, water, air, wetlands, and wildlife management. It is funded at \$5.8 billion through 2007. Because of the importance of water issues, 60 percent of the funding is for animal agriculture, with an assistance cap of \$450,000 per farm.

A new approach in the farm law is to provide technical and financial assistance for the conservation and protection of natural resources on private working lands. The Conservation Security Program offers assistance to all producers who practice good stewardship on their farms and provides incentives to help cover the costs for those who want to add additional conservation practices.

These and many other U.S. Department of Agriculture natural resource conservation programs follow the voluntary, incentive-based model that farmers have supported starting with the soil conservation programs of the 1930s.

Approaches that include the agriculture community in their design and execution, that are based on local decisionmaking, and that produce results while complementing the goals of the farm business have proven useful in achieving natural resource protection for agriculture. Producing food and fiber for the nation and the world, improving environmental practices on working lands, and maintaining a sound economic base for current and future farm businesses are the multiple goals that farmers and the public are striving to achieve.

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Dave Salmonsen

in the United States far outpaces the acreage available for safe disposal.

We should have learned lessons from our experience with hazardous waste. For years, communities and agencies have battled severe problems caused by the reckless disposal of liquid hazardous waste, often into surface impoundments. Strict regulation of hazardous waste management and disposal has mitigated these threats substantially over time. Similar to the CAFO industry, hazardous waste generators have often used dubious claims that their wastes were actually “useful products” in order to evade regulation. But government regulators have wised up and regulate hazardous waste “recycling.”

While nitrates, the most common CAFO pollutant, may not rise to the level of PCBs as a threat to the environment, they and other contaminants like the dreaded *E coli* bacterium pose a very serious problem. And just like manufacturers generating hazardous waste before the passage of the CWA, RCRA, CERCLA, etc., a CAFO producing a saleable product has little incentive to expend resources on the management of animal waste by-products. CAFOs will, as rational economic actors, attempt to externalize the costs of waste management, and there is a dire need to check this economic distortion with environmental regulation.

Ideally, the regulation of CAFOs would embrace the lessons of hazardous waste management and quickly evolve. For example, pollution prevention should be the first order of priority. The Sierra Club recently commissioned an engineering study of dairy waste reduction, and one obvious, readily available solution is to reduce the volume of waste by not diluting it with flush water. The hog industry appears to be headed this way, albeit very slowly. As part of a settlement with the state of North Carolina, the industry is funding research into alternatives to the predominant method of simply pooling huge volumes of liquid waste in open pits and then spraying it onto land.

Another important step toward solving

the CAFO pollution problem is to deal effectively with the manure runoff issue. Unfortunately, the new federal rules governing CAFOs will not bring us any closer to solving the problem, and perhaps may make it worse. The new regulations create an enormous loophole, one that the CAFO industry will undoubtedly use to maintain the status quo or perhaps even to dump more wastes into our waterways.

Aware of the pollution potential of large-scale animal production operations, Congress has always included CAFOs in the same category as other industrial pollution sources under the CWA and defined them as point sources. As point sources, these operations are prohibited from discharging pollutants without a permit.

Unfortunately, in the years since, the federal regulations governing CAFO pollution have been some of the least enforced, least effective national environmental standards ever. The absolute refusal of many states to even implement a CWA regime for CAFOs tells the story in a nutshell. In the face of industry and Farm Bureau opposition, many states have snubbed EPA and promoted voluntary compliance programs in

place of mandatory Clean Water Act rules. But voluntary programs have not solved the problem.

According to a report recently released by the General Accounting Office, about 7,000 of America's 11,500 largest CAFOs have avoided federal regulation. While many of those facilities were overseen at the state level, the GAO reported that state programs often lacked one or more fundamental elements of the federal program, including crucial public participation requirements.

Perhaps EPA would like us to believe that the new rules will make a difference. The agency claims that the recently promulgated regulations will “protect America's waters from wastewater and manure,” but its reliance on “nutrient management plans” as the central device to control pollution casts serious doubt on this claim. If proper nutrient management plans were the silver bullet, the

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government review  
or public scrutiny*



massive fish kills and groundwater contamination of recent years would not have occurred. Almost every CAFO in existence already has some sort of nutrient management plan that purportedly constrains its disposal of animal waste. But, just like the new federal rules, these plans are extremely open-ended, difficult to interpret, and almost impossible to enforce.

The central problem with the new regulations is the lack of government and public oversight of the nutrient management planning process. Under the new rules, the CAFO writes its own management plan, *without any obligation to subject the plan to government review or public scrutiny*. The plan then becomes the centerpiece for pollution control. And pollution control is changed in a very important way, by a sleight-of-hand regulatory redefinition. The new regulations define runoff leaving the fields upon which manure has been applied in accordance with the nutrient management plan as "agricultural stormwater." Agricultural stormwater is a special category of pollution that is *expressly excluded from federal regulation under the*

CWA. So, by defining the runoff as agricultural stormwater, the agency placed the runoff water — a source of pollution that Congress recognized over 30 years ago as a major problem — out of regulatory reach. EPA goes so far as to state in the preamble to the new regulations that "no further [restriction on the polluted runoff] will be authorized, for example, to ensure compliance with water quality standards. Any remaining discharge of manure or process wastewaters would be covered by the agricultural stormwater exemption and would be considered nonpoint source runoff."

The new rules effectively shut the public out of the process and ensure that vast quantities of waste will flow into our waters unabated. Any CAFO that is polluting a nearby stream can simply claim that it is complying with its nutrient management plan. Any discharge from the operation, it could argue, is agricultural stormwater and thus outside the scope of the Clean Water Act. The public has

no way to refute this claim because it lacks access to the nutrient management plan and therefore cannot verify whether the CAFO is meeting the plan limits.

Shielding the plan from public review almost assuredly will lead to manure application rates that will result in heavily polluted runoff. The regulations do not provide strict standards for nutrient management plans; instead, they only require the plans to "control runoff of pollutants to waters of the United States" by "minimizing nitrogen and phosphorous movement to surface waters." Transporting manure away from the CAFO is expensive, and any rational actor will seek to minimize expenses by applying the waste on site as much as possible. Without strict regulatory standards and absent governmental and public pressure, CAFOs will adopt nutrient management plans that allow continued dumping of billions of gallons of waste at levels beyond the assimilative capacity of the soil.

The environmental community is taking up the fight for increased regulation. In addition to suing to invalidate the new regulations, environmentalists successfully sued the state of Indiana for refusing to issue CWA permits to CAFOs. In Michigan, the Sierra Club and other groups petitioned EPA to withdraw the state's CWA authority, and then began suing some of the worst offending CAFOs individually for failing to have permits. The state partially came around and is now promoting a general permit regime.

Another giant hole in the federal regulation of CAFOs comes from the absence of air pollution regulation. There are no federal controls on air pollution from CAFOs, although federal agencies have begun to acknowledge the problem. Recent studies by the National Academy of Sciences and a USDA task force have recognized the serious nature of CAFO air pollution, yet have called for what will likely amount to years of further study to develop emissions factors and standards.

*The regs define runoff from fields on which manure has been applied in accordance with a nutrient management plan as "agricultural stormwater" ...*

**C**an you imagine telling the children and parents of a rural family that the air pollution wreaking havoc on their lives requires years of study before the federal government will step in? The recommendations of the USDA Task Force or National Academy of Sciences for further research on CAFO emissions factors may not be completely biased or wrong. But if the federal government is going to take its sweet time to act, it should step out of the way and let nuisance law and local governments protect citizens from an industry that causes acute harm now, not later.

Frustrated by the lack of meaningful controls on the federal level, private litigants have returned to traditional common law remedies. Many rural Americans are outraged by their noxious neighbors and bitterly complain about the overwhelming stench. CAFO odor is a toxic stew of air pollutants with strange identifying characteristics. Isobutyric acid smells like rancid butter. Isovaleric acid stinks like smelly feet. None of these compounds are regulated, yet these odors surpass any historical notion of annoyance. Countless stories exist of rural people unable to open their windows in hot weather, of constant nausea, of people driven to the brink — such as the 82-year-old corn and soybean farmer from Lenawee County, Michigan, who will be sentenced this fall on charges of making obscene phone calls to the Michigan Department of Agriculture, after telephoning repeated complaints over the stench from a nearby dairy feedlot.

The magnitude of CAFO odors can be measured in part by the magnitude of nuisance verdicts associated with this pollution. Iowa's largest hog producer was hit with a \$33-million court judgment in a nuisance lawsuit brought by a group of property owners. The award is believed to be one of the largest against a livestock-confinement operation in the nation. In Ohio, Buckeye Egg was stuck with a \$19 million verdict, a penalty unheard of in that state.

In another suit, decided in 1999, jurors awarded more than 50 rural residents \$5.2 million in damages for nuisance odor, fly infestations, and spills caused by hog operations in northern Missouri. The Missouri Court of Appeals unanimously affirmed the judgment, writing in its opinion that the cessation of the nuisance was both "reasonably practicable and economically feasible."

Similar tort lawsuits are popping up across the country. A slew of tort lawsuits in Minnesota recently settled when the operator agreed, among other things, to close the primary lagoon at a controversial site and install a covered cement tank. An Alabama judge recently issued an order enjoining a hog CAFO from restocking its facility until something was done to correct odor problems.

A few states are ahead of EPA in regulating CAFOs, but the coverage is spotty. Due in part to the nightmares of Hurricane Floyd, when hog operations were swamped and

surrounding areas inundated with a mixture of raw animal waste and flood waters, North Carolina is operating under a moratorium on the construction of new or expanded swine operations, and is committed to phasing out lagoons and sprayfields through application of environmentally superior technologies. Improved waste management systems are being tested by researchers at North Carolina State University's Animal & Poultry Waste Center.

Similarly, the governor of South Carolina issued an executive order in April

2001 declaring a state of emergency with respect to swine facilities and imposing a moratorium on the siting of new facilities. Subsequently, to fill a void left by federal law, South Carolina issued emergency rules in 2001 addressing such problems as lagoon leakage by requiring the installation of synthetic liners.

But state rules alone will not solve the crisis. State rules are scattershot: for example, only a handful of states (Colorado, Minnesota, Missouri, and Nebraska) regulate air pollution from CAFOs in any meaningful fashion. And state rules are only sporadically

*... which is a special category that is expressly excluded from federal regulation under the Clean Water Act; EPA has placed it out of regulatory reach ...*

enforced. Among other problems, the state agencies regulating CAFOs tend to suffer the age-old "capture" syndrome of being too cozy with the regulated community. One striking example of this occurred in Oklahoma when the state attorney general was forced to sue the state's own Department of Agriculture on behalf of its Wildlife Management Agency when the Agriculture Department issued a questionable permit. Then there is the other age-old problem of limited staff and resources: a study commissioned by the Minnesota Legislature found that state agencies rarely inspected feedlots or examined their environmental effects, despite widespread complaints about odor and suspected groundwater pollution.

Many local counties and townships have taken matters into their own hands, by enacting strict ordinances that either drastically limit the scale of CAFOs or effectively zone them out of the neighborhood. Grand Forks County, North Dakota, for example, passed an ordinance with severe setback requirements for CAFOs. Some Pennsylvania townships have banned corporate ownership of hog and poultry units, passing ordinances modeled on state laws in Nebraska and South Dakota. This trend has resulted in a nationwide civil war of litigation between agribusiness interests, often led by the Farm Bureau, and local governments.

In Worth County, Iowa, for instance, county officials adopted an ordinance to protect citizens from CAFO pollution. A local official best summed up the predicament: "When we look at the influx of confinements coming into the state, we need to do something. We can't regulate whether they come in or not. But we can regulate some health issues." But the state, eager to please the CAFO industry, adopted a preemption statute forbidding counties to regulate CAFOs. Agribusiness interests successfully challenged the Worth County ordinance in state court, and the case is on appeal to the Iowa Supreme Court.

In Norton County, Kansas, a staunchly

conservative farm and ranch community on the Nebraska border, the county recently passed a resolution establishing regulations on confined swine and beef operations. But it was invalidated by a legal challenge brought by CAFO interests.

Wisconsin is in the midst of a similar battle, where state legislation has been introduced to preempt local control. The words of Paul "Biff" Hansen, a Manitowoc County board supervisor, probably typify the sentiments of many local officials: "I am very much an environmentalist, and I know farmers are, too. We need to leave zoning decisions up to counties — that's something for the county to fight out amongst itself."

The situations in Iowa, Kansas, and Wisconsin are emblematic of the fight taking place all across America. Citizens are fed up with having to breathe polluted air and drink contaminated water, and they are pushing back with local control efforts.

There is nothing inherently unworkable about allowing complementary local controls over CAFO siting and health and safety. A recent statewide environmental study commissioned by the Minnesota legislature recognized the need for local control. Missouri allows its counties to impose local controls. Even that hotbed of radicalism, Nebraska, has a strong tradition of local zoning for feedlots. (Not surprisingly, that tradition was also attacked at the state's Supreme Court but local interests prevailed.)

In addition to the battles being waged between local officials and CAFO interests, the ability of property owners to bring nuisance claims is also under attack. Almost every state has enacted some form of "right to farm" law. In general, these laws purport to give agricultural operations protection from nuisance lawsuits. Right to farm laws are closely aligned with, and often include, state preemption provisions that protect CAFOs from stringent local measures. Right to farm laws were originally intended to protect farmers from encroaching suburban homeowners who might

*... Any CAFO that is polluting a nearby stream can simply claim that it is complying with its nutrient management plan; any discharge is stormwater ...*

complain about odor and dust associated with traditional farming practices. But today these ordinances are often used by the CAFO industry as shields to defend against nuisance lawsuits or to knock down local ordinances seeking to address serious CAFO pollution problems.

In Iron County, Utah, for example, county officials adopted an ordinance that subjected CAFOs to criminal nuisance charges in extreme cases when odors or by-products adversely affected the surrounding community. CAFO-friendly legislators in the state house pushed through a law providing CAFOs with a "complete defense," so long as they complied with federal, state, and local laws; the state law essentially nullified the Iron County ordinance. Perhaps not surprisingly, the statute was sponsored by a state legislator who also happened to be the largest turkey farmer in Utah.

Numerous courts have begun to strike down right to farm laws. In Washington state, a number of family farmers filed a nuisance suit against a feedlot that moved in next door. The feedlot claimed that Washington's right to farm statute protected it from the farmers' nuisance suit. The Washington Supreme Court disagreed and held that the right-to-farm law does not bar suits from other agricultural producers and only applies to nonagricultural (residential) development. The court did not invalidate the state law on constitutional grounds, but it laid the foundation for a future constitutional challenge by concluding that the right to farm statute created an easement on the neighboring property.

The state Supreme Court in Iowa did reach the constitutional issue in a challenge to a state law that created "agricultural zones," which provided agricultural operations within designated zones immunity from nuisance suit. The court held that the safe harbor for operations within the zone restricted neighboring landowners' property rights and thus constituted an unconstitutional taking.

Rural residents who bear the brunt of CAFO pollution often find themselves against a brick wall of uncooperative federal and state legislators and compromised bureaucrats. Agribusinesses, including the CAFO industry, lavishly contribute to federal and state election campaigns. For example, agribusinesses poured \$26.7 million into state elections in the 2002 election cycle. Of this amount, the livestock and poultry industries contributed over \$6 million. Agribusinesses do not limit their contributions to state races either: agribusinesses spent over \$23 million on federal election campaigns in 2002.

**T**he CAFO pollution problem is immense. The industry has exploded and has outpaced the existing regulatory regime. Much remains to be done, and significant statutory and regulatory changes are needed to

address the myriad problems associated with the CAFO industry. The most pressing need today, though, is to stop the regulatory regress. On the federal level, the Bush administration must stop weakening the laws to allow for more CAFO pollution. And at the state houses, legislators need to stand up to the industry and stop passing special protections for CAFOs that harm their constituents.

But with no sure protection on the federal or state level, perhaps the best hope for people victimized by CAFOs lies with

their local governments and state court-houses. Nuisance lawsuits and local regulation paved the way for the federal environmental legislation we enjoy today. Large nuisance verdicts evince the public outrage with the devastation wrought by CAFOs. And local control ordinances demonstrate that local officials, unencumbered by hefty campaign contributions, will act directly to protect their constituents. Until federal and state legislators fully wake up to the problem, fights in the courts and city halls are the last stand. •

*... The public has no way to refute this claim because it lacks access to the nutrient management plan and cannot verify whether the CAFO is meeting the limits*