

## **Manure management in Iowa**

### **What are the problems? What reasonable steps will help?**

**(An informational Council booklet prepared for the 2001 legislative session)**

Large confinement operations are here to stay. But we need adequate protections so that we can still live in our homes and have the same quality of life that we had before."Blaine Nickles, farmer, Wright County

"As a physician who grew up in rural Iowa, I know first-hand how hard it is to live near one of these operations, and I've heard it from patients. Psychological and other effects are real and can cause serious problems." Dr. Stephen Gleason, Director, Iowa Department of Public Health

#### **The Iowa Environmental Council stance:**

The Council supports Iowa's family farmers. We have a number of conservation farmers on our board. We are not interested in shutting down the livestock industry in Iowa. We are interested in protecting Iowans and Iowa's land, air, and water from contamination caused by inappropriate management of livestock manure. Our current laws will not work, even if we "give them time," because they overlook many problems. For example, our current laws:

1. Do not keep manure away from particularly valuable and vulnerable resources.
2. Do not keep manure out of floodplains, so our waterways are particularly vulnerable to contamination from catastrophic spills during flood events.
3. Do not protect Iowans from the health effects of nearby livestock operations.
4. Do not give the state the resources it needs to educate about, monitor, and enforce manure management requirements.
5. Do not include phosphorus when determining appropriate manure application rates. As a result, water bodies are being polluted by phosphorus.
6. Do not give counties control over where facilities can be sited and manure can be spread.
7. Do not require contractors and growers to share responsibility for their livestock manure.

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### **More hogs, fewer farms**

Iowa is rapidly losing family farmers, and fewer farmers are raising livestock. As a result livestock are being raised in larger facilities and are becoming increasingly concentrated in smaller areas.

Too many animals on too little land may result in the over-application of manure on available cropland. In addition, people living in areas with huge concentrations of animals are experiencing health problems from air pollutants and other quality of life impacts.

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### **Manure spills cause serious problems**

An estimated 1.7 million fish and unknown numbers of other aquatic life were killed by manure from 1995 to 1999 because of mis- or overapplication of manure, storage overflows, runoff from open feedlots, and other causes.

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### **Additional resources are needed to educate about, monitor, and enforce manure management requirements.**

History has demonstrated that a solid education program with farmers produces good results. The Integrated Farm Management Demonstration Program, which involved farmer-to-farmer demonstrations and other assistance, resulted in real improvements in protecting the environment and the productivity of the farmer.

A lot of spills are coming from facilities that are below the permit threshold but are required to have manure management plans (MMPs). If the Iowa Department of Natural Resources had more staff, those MMPs could be used as vehicles to help these producers identify problems and fix them before damage occurs. Instead, DNR faces an extensive backlog.

Data from recent spill investigations tell us what is causing most of the serious manure spills in Iowa. Mis- or overapplication of manure on cropland and manure storage failure and overflows have been a consistent problem. Looking at 1998-99, open feedlots were the number one cause of water pollution. One of the main reasons additional staff is needed at DNR is so that the agency can increase work with livestock producers, especially those who operate open feedlots.

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### **Keep animal feeding operation structures from the 100-year floodplain**

Right now, large quantities of manure are being stored in floodplains, making our waterways particularly vulnerable to contamination from catastrophic spills during flood events. Currently, livestock facilities are only restricted from locating in the 50-year floodplain. Extending this protection to the 100-year floodplain will also increase protection for alluvial aquifers, which are sand and gravel deposits along our rivers that provide water supplies for shallow wells.

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### **A phosphorus standard, along with a nitrogen standard coupled with erosion limitations, must be part of any manure management strategy.**

The problem: One-third of the waters on Iowa's impaired waters list are impaired by phosphorus. Sixty percent of Iowa cropland soils tested at high or very high for phosphorus, according to Iowa State University.

Why do we care: Too much phosphorus leads to the death of fish and other aquatic life. When land application rates of manure are based solely on the nitrogen needs of the soil, phosphorus accumulates. When dissolved phosphorus gets into the water, it stimulates the growth of bacteria, plants, and algae. The algal blooms then lead to oxygen depletion and the death of aquatic life.

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## **Protect rural Iowans' health**

**Problem:** People living near large animal confinement operations are experiencing health problems, as well as a diminished quality of life. Among the problems reported: Respiratory problems, sore throats, diarrhea, and headaches.

**Action needed:** Iowa should develop and implement a monitoring strategy for air quality. Iowa is the largest hog producing state. North Carolina is second, and Minnesota is third. Iowa should be taking the lead in ascertaining the air quality effects that livestock facilities are having on Iowans' health.

People living near large animal feeding operations face real health hazards. This is not just a "nuisance" issue. Listen to these experts:

"Adequate evidence currently exists to indicate airborne emissions from large-scale swine facilities constitute a public health problem," according to the Centers for Disease Control and Prevention (The Confinement Animal Feeding Operation Workshop, 1998).

Detailed surveys of people living in three rural North Carolina communities indicate industrial hog operations both reduce the quality of life for people living near them and adversely affect their health. "In particular, headache, runny nose, sore throat, excessive coughing, diarrhea, and burning eyes were reported more frequently in the hog community," said Dr. Steven Wing, a professor at the University's School of Public Health.

Toxic gases coming from a manure lagoon of one of Minnesota's largest hog confinements pose a potential health threat. The Minnesota Health Department monitored the operation, ValAdCo, for two years and found hydrogen sulfide levels far exceeding the state health standard. Studies suggest that high levels of the gas can cause respiratory problems, nausea, sore throats, and headaches.

"Large animal-confinement operations may cause human health problems," according to Dr. Stephen Gleason, Director of the Iowa Department of Public Health. . . . "As I've said, I feel in my gut there is a connection between large animal confinement operations and human health problems," said Gleason, "and I look forward to seeing the data that would support it."

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Counties need control over where facilities can be sited and manure can be spread.

"Rural Iowans, especially in Humbolt, Wright, and Hardin counties, feel disenfranchised. All we are asking is for the right to put certain areas off limits and to avoid the loss of rural property values. It's a simple request."

Steve Throssel, Eldora businessman

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## **Contractors and growers must share responsibility for their livestock manure**

When individuals or corporations contract with local growers to raise cattle or pigs to market weight, responsibility for manure management generally rests with the grower. To protect the environment and assure more fair assignment of responsibility for good manure management practices and potential cleanup costs, contractors and growers must share responsibility for manure management and legal responsibility for any environmental damage.

An example best illustrates the problem:

A large contractor in Iowa has complete control over the construction of the confinement buildings his growers use. He provides the financing and the plans for the building design, and his construction company builds the building. Later, if there are problems with the manure piping, for example, only the grower -- and not the contractor -- will be liable, even though the grower had little control over the quality of work.

Requiring joint liability between contractors and growers will help stop problems before they occur. Contractors would have the incentive to provide training and education on manure testing, handling, and land application.

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## **Protect Iowa's valuable and sensitive areas from livestock manure**

At risk are Iowa's drinking water sources, state parks, habitat for threatened and endangered species, and other valuable areas. Floodplains are also very vulnerable, because of the risk for catastrophic spills.

Manure is being applied in these sensitive areas. Anaerobic lagoons and other manure storage structures are located in these sensitive areas.

Protect our state parks and recreational areas, such as Lake Okoboji, the Iowa River Greenbelt, and Clear Lake.

Protect our sources of drinking water, such as Lake Rathbun, which provides drinking water for more than 50,000 people in Iowa and Missouri.

How should we define "valuable and sensitive areas"?

The following should be included:

DNR-owned or -managed parks

Big Creek Lake, Ledges, and Honey Creek are examples. - [View a map of DNR parks](#)

DNR-owned or -managed preserves

Brushy Creek, Steele Prairie, and Star Cave are examples. - [View a map of DNR preserves](#)

Water bodies the state has designated "high quality" waters

High quality waters, as defined in Iowa Administrative Code, Chapter 61, include the Iowa Great Lakes and many of Iowa's cold water trout streams in Northeast Iowa. These are waters with exceptionally better quality than minimum standards and with exceptional recreational and ecological importance. Special protection is warranted to maintain the unusual, unique, or outstanding physical, chemical, or biological characteristics that these waters possess. - [View a map of high quality waters](#)

Water bodies the state has designated "high quality resource" waters

High quality resource waters, as defined in Iowa Administrative Code, Chapter 61, include Lake Rathbun and portions of the Iowa, Boone, Wapsipinican, and Maquoketa rivers. They are waters of substantial recreational or ecological significance that possess unusual, outstanding, or unique physical, chemical, or biological characteristics that enhance the beneficial uses and warrant special protections. - [View a map of high quality resource waters](#)

Iowa's "protected water areas"

Iowa's protected water areas include portions of the Little Sioux, Boone, Middle Raccoon, Upper Iowa, and Wapsipinican rivers. Protected water areas are selected as the best examples of the remaining natural areas along lakes, rivers, and marshes to assure their continued existence. The waters are defined in Iowa Code Chapter 426B. - [View a map of Iowa's protected water areas](#)

Rivers included on the Nationwide Rivers Inventory

These rivers include portions of the Yellow, Turkey, Maquaketa, Wapsipinican, and Cedar rivers in Iowa. They possess "oustandingly remarkable" natural or cultural values that have been judged to be of more than local or regional significance. - [View a map of Iowa rivers on Nationwide Rivers Inventory](#)

Waters that are habitat for threatened and endangered species

Iowa's struggling populations of fish and other creatures are impacted by livestock manure. For example, in July 1997 a manure spill ran into Crane Creek, killing an estimated 109,000 fish, including 302 American Brook Lamprey, a threatened species in Iowa.